engineers, rural development programmers and planners alike. It was, therefore, deemed necessary that nutrition be integrated into the planning and development process, through primary care and road to Health Strategy (RHS).

Primary Health Care:

The Declaration of Alma Ata defined primary health care as follows:

"It is essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost the community and the country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination."

The introduction of primary health care of this nature will require fundamental reappraisals of the health system in all countries and bold decisions by government and people to take the necessary action in the light of these reappraisals. Government decision and popular insistence are also necessary to ensure that the many sectors in addition to the health sector take the action required to promote health, particularly by ensuring the availability of at least the eight essential elements of primary health care defined as follows in the Declaration of Alma Ata:

- education concerning prevailing health problems and the methods of preventing and controlling them;
- promotion of food supply and proper nutrition;
- an adequate supply of safe water and basic sanitation;
- maternal and child health care, including family planning;
- immunization against the major infectious diseases;
- prevention and control of locally endemic diseases;
- appropriate treatment of common diseases and injuries;
- provision of essential drugs;

Primary Health Care can only be put into practice by building up a solid health infrastructure with suitably trained health workers applying a health technology that is practical, scientifically sound, socially acceptable and economically affordable.

To strengthen and reorganize health systems in this way both governments and people have important responsibilities. For governments to fulfil their responsibilities, the political commitment of the government as a whole, and not merely the ministry of health, is vital. Nevertheless, ministries of health have a crucial role to play as the directing and coordinating authority on all national health matters.

It is useful to enumerate the kind of health activities which should improve and maintain adequate nutrition, because many evaluation steps must take into account the determinants of these activities and factors which modify the results of these activities. Furthermore this research programme should review this list to see if the evaluations done to data to substantial the utility of each of these activities are adequate.

NUTRITION IN PRIMARY HEALTH CARE

For purposes of discussion technical activities within PHC are restricted to those delivered by those persons in contact with the families and family members in a community who are administratively responsible for health.

Many of the PHC activities enumerated below are thought to have synergistic effects, and should therefore be performed togather. In this case it is the joint not the independant activities which should be monitored and evaluated.

Many PHC programmes are based explicitely or implicitely on the "Road to Health Strategy", which uses growth monitoring during pregnancy, infancy and early childhood to bring the mother and child into contact with the health services at critical moments in the development of the child and family. Components which often depend on the "Road to Health Strategy" are identified below by RHS.

NUTRITION ACTIVITIES:

NUTRITIONAL SURVEILLANCE IN THE COMMUNITY:

The purpose of this surveillance to identify the need for action. Data acquired from the screening step in the RHS can sometimes be used for this purpose. However it is important first to determine what decisions are going to be made on the basis of the surveillance data and what specific activities these decisions will trigger. It is obvious that there is no meaningful surveillance unless the information flows to these who have authority for action.

Often the review of required activities, authorities who can decide these activities and the information they need to make decisions reveals that the data required is better obtained from other sources than the RHS screening activity if the information required is to identify:

High risk groups and their characteristics trends in nutrition and health in the community and their likely causes so as to undertake or proposes new or expanded activities.

It is known that certain groups in the population are specially vulnerable to nutritional problems. These are children between the ages of 6 months and 3 years, and women who are pregnant or lactating. Families with pregnant mothers and young children can again be divided into groups at high and low risk by using information from the nutrition survey described earlier.

The following children in developing countries are known of becoming malnourished (WHO Momual): (Manual 59)

1) All infants who are not breast-fed.
2) Infants with low birth-weights, below 2.5 kg.
3) Twin or multiple births.
4) Children high in the birth order, *i.e.*, 5th, 6th or subsequent children in large families.
5) Children in a family in which an older brother or sister died in the first year after birth.
6) Children with illnesses, particularly measles, whooping cough, or repeated diarrhoea, especially in the early months of life.

7) Children of poor families.
8) Orphans or children with only one parent.
9) Children with a growth curve which does not slope upwards, as explained in Module 2.
10) Children who are cared for by older children.
11) Children with congenital defects, *e.g.*, cleft-palate.

Certain groups of women are also at risk of malnutrition. This can affect not only their own health and capacity to work, but also that of their children. They are:

1) Women who are wasted or underweight are the beginning of a pregnancy.
2) Women who gain too little weight (less than 6 kg) during the course of pregnancy.
3) Women who have too short a period (less than 6 months) between the end of one pregnancy and the beginning of the next pregnancy.
4) Women who become pregnant before the age of 15 years.
5) Women who have had more than five children.
6) Women who have previously given birth to babies with a low birth-weight (less than 2.5 kg).

There may be special risk factors for women and children among different groups in the community. Hence, it is important to observe carefully all social groups.

A. GROWTH MONITORING

Growth is the gradual increase in size of the body and its organs. Development is the increase in the number of skills performed by the body, including the brain, and in the performance of those skills. Growth and development are fundamental features of children. If a child is growing well he is probably health and adequately nourished. If a child is not growing well, there must be some reason for this. He may have some illness or he may not be receiving adequate nourishment (food). Months before a child has abvious signs of malnutrition he will have stopped growing. Measuring a child's growth is one way of measuring his health and the quality of his nutrition.

Growth is measured in different ways. Body weight is the simplest measurement, and in children change in weight is the most reliable indicator of growth. When a baby is born he weights about 3 kg. If he grows well he will weight about 6 kg by 5 months of age and about 9 kg by one year of age. This means that healthy babies double their birth-weight in 5 months and treble their birth-weight by 12 months. After that the increase in weight is not so fast – only about 2 kg per year.

Height (or length in the case of infants) is another measure of growth. At birth a baby is about 50 cm long. By 1 year of age he should be about 72 cm long. Height is a particularly useful indicator of growth among older children. If a child is quite long or tall, but his weight is low, he is thin or wasted. A malnourished child may also be short or stunted.

A baby's head grows very quickly, especially in the first year of life. This is because the brain is growing very rapidly. Development, or the increase of skills, mainly depends on the brain and the nervous system. The growth and development of the brain requires adequate nutrition,

just like other parts of the body. When a baby is born it can do very little for itself. Gradually he develops and is able to move his body in the way he wants and can do simple things. Special skills like talking develop later. It is useful to know the age when most children can do some simple things. These are used as markers of development and are sometimes called "mile-stones of development".

Milestones of development	Age	
	Average baby	Nearly all babies
Able to sit without support	6½ months	9 months
Able to walk 10 steps without support	12 months	18 months
Able to say single words	15 months	21 months
Able to speak short phrases	23 months	36 months

Factors other than nutrition can also influence development. Children only develop skills if they are given the opportunity. Stimulation, particularly the presence of people who take an interest and talk to them, helps children to develop. Children left alone and given nothing to play with will develop slowly. There are only small differences in the rate of growth and development in different races. Race does not have an important influence on growth and development compared with adequate nutrition and stimulation.

In children normal growth and development are signs of good health and nutrition. One of the best ways to measure a child's health is to measure growth, and one of the easiest ways of measuring growth is to weight a child regularly and to compare the weight with the standard weight for that age.

B. BREASTFEEDING AND FEEDING DURING BREASTFEEDING:

WHY TO BREAST FEED?

Breast milk is the best natural food for babies.
Breast milk is always clean.
Breast milk protects the baby from disease.
Breast milk is available 24 hours a day and requires no special preparation.
Breast milk does not need to be purchased.
Breast-Feeding makes a special relationship between mother and baby.
Breast-feeding helps parents to space their children.

NATURE AND TIMING (WHO MANUAL)

How many times a day should a young child be fed?

At first, when the baby is still being breast-fed, give cereal porridge, 1-2 small spoonsful twice a day. The amount and the number of feeds per day should be increased gradually. by 6-9 months of age a child should be fed 3-4 times a day in addition to breast-feeds.

How should the meals be timed in relation to the breast-feeds?

At first, when a child is learning to take new foods, give the foods when the child is hungry before breast-feeds. When the child is taking the porridge or mixtures well, give the breast-fed first, or between other meals. In this way the baby will suck the breast hard because he will be hungry. This will encourage a continued supply of breast milk. Remember, breast-feeding should continue for 2 full years if possible.

How much food should a child take at one meal?

If he is just starting to eat, or if a new food is being introduced, 2 small spoonsful may be enough. Once he is used to the new food and flavour, he should be given at least 3 large spoonsful (tablespoons) of food for each meal. If he can take more, more should be given. If he is unwilling to take this amount if may be necessary to divide the amount into 2 smaller meals. If this is done, the amount preserved for the second small meal should be carefully protected from flies and covered container. It should be preserved only for 1-2 hours, not longer.

Feeding small children should be a priority within the family.

Feed the young child first because he eats slowly and cannot compete with older children and adults for the limited food prepared for a meal. Feed the girls as much and as frequently as the boys. By the time a child is 2 years old he or she should eat half as much as an adult. It is good for a small child to have his own plate and portion of food. When a child is ill, he still needs nourishment. He may lose his appetite, but he needs strength to get better from the illness. Time and care must be taken to help an ill child eat enough food.

C. MATERNAL NUTRITION:

Pregnancy is the time when a new person is being formed inside the body of the mother. The unborn child is completely dependent on the health and well-being of the mother. If a mother has some disease, the baby may be affected. If a mother does not have enough food, the baby may be small and weak.

During pregnancy the mother needs extra food in order to make the baby strong and healthy. Therefore, the mother should have a diet which contains all the raw materials needed for forming strong bones and tissues. A mother needs not only extra food, but also certain types of food.

Mothers who do not have enough food during pregnancy will have smaller babies. Their babies will have a low birth-weight. Small babies are often weak and not healthy. There are more illnesses and deaths among small babies than among larger, normal-sized babies. Low-birth-weight babies are especially at risk of becoming malnourished. Therefore it is important for pregnant women to have enough food.

If a mother has a good diet during pregnancy she becomes heavier and put on fat. Her abdomen enlarges because her womb becomes bigger with the growing baby inside. Her breasts enlarge and get ready to produce milk. She collects a layer of fat under the skin. This is impor-

tant because it is this stored fat that is used to make much of the milk in the months when she is breast-feeding. If she does not have enough food when she is pregnant, she will not store enough fat, and if she does not have enough fat she will not produce enough milk.

The diet of a woman when she is breast-feeding her child is also important. The food a mother eats is partly turned into breast milk. If she does not eat enough food, or does not eat foods with the right nutrients, she will have less milk. A mother makes 500-750 ml of milk per day. This depends on a regular supply of food. If a mother continues to breast-feed for several months without having enough food she will soon become weak.

The amount of food a mother needs in both pregnancy and lactation also depends on the amount of work she does. If a woman has to do long hours of heavy work she must have more food than a mother who does not work. During pregnancy and lactation a mother should rest more so her food can be used to help her baby grow.

A good diet for pregnancy and lactation

During pregnancy and lactation a woman needs more food and a greater variety of food. More food is the first and most important thing. Diets based on cereals are generally good, but the woman needs more of them. She should eat one-fourth more food than she was eating before she became pregnant (25% extra). Find out how much she was eating before. Divide that into 4 portions. Tell her, or better show her, how much one of these portions is. This is the extra food she should eat, not only in pregnancy, but right through lactation. A pregnant woman or a lactating mother must truly "eat for two people".

DISTRIBUTION OF SPECIFIC NUTRIENTS TO COMMUNITY ON HIGH RISK GROUPS

Where community assessment or surveillance indicates a widespread need.

Iron to pregnant mother and older infants
Vitamin A to infants and preschool children
Iodized salt especially to girls and fertile women

SCREENING FOR MALNUTRITION IN PREGNANT WOMAN, MOTHER OR CHILD AND APPROPRIATE THERAPY OF REFERRAL

This is a crucial component of the "Road to Health Strategy". Unfortunately recent evaluations of some screening programmes have revealed that those activities which are supposed to follow upon identifying a malnourished child are so ill defined that screening (*e.g.* use of growth charts) as presently practiced is of doubtful utility. One might presume that screening would trigger the following activities:

Curative treatment of malnourished children in the:

1) Hospital
2) Nutritional recuperation center
3) Home

Nutrition Education to the mother and mother to be the content of this education is the same as that discussed above under "Nutrition Education to the community and to high risk groups". However in this case it can be adapted so that it is appropriate for the age of the fetus or child, and for the growth performance of the child. Furthermore it can be done one-on-one with the mother so that her circumstances can be ascetained and taken into account.

Distribution of supplementary foods to the mother, child or family Distribution of specific foods to the mothers or child.

- Iron
- Vitamin A
- Iodized oil/Salt

ACTIVITIES WHICH AFFECT NUTRITION
HEALTH EDUCATION (RHS) INCLUDING SANITARY WATER USE AND WASTE DISPOSAL ACTIVITIES PERFORMED BY HEALTH PERSONEL TO PREVENT ILLNESSES (RHS)

These activities are usually performed using the "Road to health Strategy" (RHS) which uses growth monitoring during pregnancy, infancy and early childhood to bring the mother and child into contact with the health services at critical moments in the development of the child and family. Other activities which often are also partially or completely delivered through the RHS are identified with RHS below:

Prenatal care
immunization
malaria chemoprophylaxis

CURATIVE CARE TO REDUCE SEVERITY AND DURATION OF ILLNESSES

Diarrhoea control (oral rehydration education supplied in RHS) International Parasite control (often done in RHS) this is especially true of those parasites which cause losses of blood.

1. INTRODUCTION

AICF is a French Organization working for 5 years in Baluchistan in the 2 most important refugee camps:

- Surkhab = 110,000 refugees
- Pir Alizai = 80,000 refugees

Sanitation, vaccination campaign, health education and primary health care are parts of its activities.

AICF is running a specific project for women and children. In accordance with the Islamic rules, female staff and lady doctors are working in our 2 dispensaries.

Nutrition is also part of our programme although malnutrition does not seem to be the main problem among the refugees.

2. AICF NUTRITION REHABILITATION CENTRE.

The malnourished children are systematically sent by the doctors after the consultation to the 2 nutritionists who are working in our dispensaries.

The degree of malnutrition is evaluated according to the weight for height, because this index, most commonly used in feeding centres, appears to be the most useful in identifying undernutrition among a population of children whose age is difficult to know precisely.

Our centre is rather small, (1 room in each dispensary) so we cannot admit so many children. We take charge of the children who need either a therapeutic feeding or a supplementary feeding in the same structure. Those who are improving are simply receiving increasing quantities of progressively varied food.

For that reason, the criteria of admission and discharge of the feeding centre are extended to both limits of therapeutic and supplementary feeding.

a) **The criteria for admission are:**

- medical refferals.
- children less than 80% standard weight for height.
- children with Clinical signs of kwashiorkor or marasmus-kwashiorkor whatever their weight for height.

Children are asked to come daily, accompanied preferably by the mother (or an older sister, or any woman of the family). On admission, patients are registered, the nutritional status measured, a medical history taken with a precise clinical examination/ searching for associated diseases and dietary requirements calculated.

On admission the child should receive a systematic treatment of:

- Fish lever oil
- Vitamin A — 100,000 ui for children 1 year
200,000 ui for children 1 year
- Potassium — 4 mmol of potassium/kg body weight/day for two weeks
- Iron — 30 mg/kg body weight/day for one month
- Systematic deworming using Mebendazole, 2 tablets once a day, during 3 days.
- Systematic antibiotic treatment will be provided to the most severely malnourished (children less than 60% weight for height or kwashiorkor), as most of them will have a camplicating disease or condition, very often unknown.

b) **Diet:**

Individual daily needs are calculated as follows:

(150 kcal/kg body weight/day (at least)
(3 or 4 g proteins/kg body weight/day

Half strength feeds are given for the first days:

(80 kel/kg body weight/day
(2 g proteins/kg body weight/day

To progress from half to full strength feeds should take no longer than 10-12 days. The volume of food required is calculated as 150 ml/kg body weight/day divided in 2-3 hourly feeds.

In the early stages of treatment, small amounts of food need to be given regularly to prevent hypoglycemia which is very frequent among malnourished children.

This means 6 to 7 feeds in 24 hours.

Our feeding centre is open from 9.00 AM to 2.00 PM and the aim is to provide 3 to 4 feeds in this period, giving daily high-energetic milk to the mother to ensure the 2 or 3 other meals at home.

c) **Preparation of food:**

- Severely malnourished children receive at first high energetic milk (HEM) prepared follows:

For 1 liter boilled water: (90 g dry skimmed milk
(70 g oil
(50 g sugar

to obtain 100 keal for 100 cc HEM.

– Improved children who have been admitted to a supplementary feeding centre, receive:

(2 meals or 3 of HEM
(1 meal of rice + meat or eggs + vegetables + cake and biscuits or fruits.

In order to teach the mothers how to wean their children and how to prepare varied food in accordance with their usual meals, advice is given daily.

d) **Criteria for discharge:**

A child is discharged when:

– a 90% of standard weight for height has been attained and maintained for at least 2 consecutive weeks.

– he is gaining weight without oedema.

– he is active and alert and has a good appetite.

– he is free from obvious illnesses.

3. RESULTS IN 1986

*About 25 to 30 children are admitted monthly to our FC in each dispensary.

*The average stay is between 1 to 3 months.

*Among all the children admitted in our centre during this year:

– 8% were kwashiorkor cases
– 2% were marasmus/kwashiorkor
– 90% were marasmus
– 95% of the children are between 0 to 2 years old.

*21% of all these children are leaving the centre against medical advices after few days or weeks, for reasons we will see further on.

*75 to 80% of the children are coming every day with their mother, sister or grand-mother.

*Less than 1% of the children are referred to hospital according to their condition.

PHASE 1981

Plans for development of primary health care based on community involvement were drafted, which called for training of community health workers and the reorientation of health staff. Expenditure on health in 1981 was US$ 6,899,250.

PHASE 1982-1984

In addition to curative treatment, preventive and promotive health care was started during 1982-1984. Integration and consolidation of the field supervision was organized by establishment of the field supervisory medical officers (FSMOs), mobile dispensaries were gradually converted into proper basic health units, with a doctor, a lady health visitor. A dispenser, a vaccinator/Health promotor and an ambulance car provided to a population of 10-15 thousand refugees. TB and Malaria control programmes were launched, stress was laid on hygiene and sanitation. Expanded Programme of Immunization (EPI) was launched, health and nutrition surveys were carried out.

HEALTH EDUCATION:

It was found that the health programme could not be fully effective without proper health education. Hence an elaborate health education programme was chalked out. Health workshops/ seminars at central level, health orientation courses at central and provincial levels and health lectures at grass root level for both paramedical staff, patients and the refugees in general were organized. All efforts were made to involve the whole community even through the religious leaders, local elders and the school teachers. Annual expenditure during these years has been between 5 and 6 million dollars.

PHASE 1985-1986:

During the last workshop, it was pointed out that the time had come to improve the quality instead of the quantity of health care. It is gratifying to note that we have come a long way in attaining our goals set during the previous workshops/seminars.

To elaborate my point, I will now show some of the slides pertaining to the subject. Some relevant data has also been attached as annexures to this key note address.

DETAILS OF MEDICAL FACILITIES:

In addition to the Government of Pakistan/UNHCR, 64 voluntary agencies are working for Afghan Refugees out of which 38 are registered with the government. Summary of the medical facilities now available to the Afghan Refugees is given as under:

The families often have difficulties going to Quetta (60 to 90 kms from the camps) and to stay with the child in hospital.

That is why they often refuse, or if they go, leave the hospital against medical advice as soon as the child seems better.

*The number of deaths is difficult to precise. When a child is absent from the feeding centre, we often don't know if he is dead, if the mother is no longer allowed to come or if the family has left for another camp or for Afghanistan.

*25% of the children coming regularly are discharged each month according to the criteria stated previously.

4. COMMENTS ON THE ORGANIZATION IN THE FEEDING CENTRE:

Daily instructions are given by 2 nutritionists in the local languages (Pashtoo or Persian) in order to teach the mothers how to feed their children and also how to prevent disease due to bad hygiene.

They are encouraging:

- Breast feeding during at least the first 4-6 months of life.
- Feeding a light mixt diet to the children from about 4-6 months age.
- Hygienic food preparation.
- Use of cup and spoon instead of baby bottles.
- Vaccination.

***Advising women:**

- to eat more when they are pregnant or lactating.
- to continue to feed their child when it has diarrhoea either with breast milk or milk diluted with an equal volume of clean water, oral rehydration salt, special diet based on rice, water and carrots.

*Dissuading the mother to give medicines systematically to the child when it has diarrhoea.

*Asking for an effective participation of the women in:

- preparing themselves in turn the food in the FC.
- bringing sometimes food from home.
- explaining to the new arrivals about:

- o good food habits.
- o hand washing and hygienic food preparation.
- o weaning food.
- o preparing home made rehydration salt in case of diarrhoea.

In our dispensaries we don't distribute milk to the children who are not coming every day to the Feeding Centre. Our aim is not to provide food but to teach the women to wean their children properly.

We found out that, most of the time, only 1 child in all the family is suffering from malnutrition and it is not always the youngest one. That is to say that the problem is in fact not a lack of food at home but either a lack of nutrition education, or a relationnal problem between mother and child.

A good relationship between the nutritionists, the cook, the women and the children coming to the feeding centre is particularly important to set up and to preserve.

The feeding centre must be a place where the women feel confident and comfortable. When the mother is unable to come herself with her child we accept an older sister or sometimes the grand-mother. These persons are often very interested and motivated and we think that it can be very useful for a young girl or an influential woman in the family to have good notions about nutrition and hygiene.

The same information is also given as far as possible to the fathers who have considerable influence in the family and who get the food from the bazaar.

The Follow-up of children:

The children discharged from a feeding centre are asked to come once a month to the dispensary for a consultation and a control of their weight.

Questions are asked to the mothers in order to see if they still remember and follow the advice given previously.

Problems faced:

The main problem we are facing is to keep the women coming every day to the feeding centre.

They are basically motivated to come but due to the Islamic culture and domestic problems, they leave the centre after few days, sometimes without any explanation. The essential reasons of this happening are as follows:

- the house is to far away from the centre.

- the husband does not allow them to leave the house daily during 5 hours.

– there is no-body at home to take care of the other children.

Until now, we did not have the opportunity, due to our structure, to send somebody in the camp to make home visiting in order to find those absent or to check the preparation of food at home.

In 1987, an out reach worker will be in charge of that and we hope it will be a good way to avoid these problems.

5. CONCLUSION:

The purpose of supplementary feeding is to make up for deficiencies in energy and proteins especially, in the basic diet of those more vulnerable to malnutrition particularly children under 5 years (and especially the age group 0 to 2 years).

Health education and nutrition education including preparation of high energy foods are an important part of AICF activities.

AICF, in its specific project for women and children is fully aware of the role it has to play in this way. The opportunity we have to reach the women directly when they come to our dispensaries and the opportunity we will have in visiting them at home, will hopefully increase the quality of our results in 1987.

MALNUTRITION AND NUTRITION REHABILITATION

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NORTH WEST FRONTIER PROVINCE

As in developing countries, malnutrition is one of the major health problems in Pakistan, especially amongst refugees. Malnutrition and infections are synergetic. The associated problem of malnutrition and infectious diseases and their bilateral reinforcing mechanism constitute the principal cause of high mortality and morbidity among infants and children under five years. In the refugee camps where ARC is running medical services, 24% of the children under 5 years are under-weight, 4% of them suffer from severe protein/calory malnutrition. This reflects poor nutrition status of under-five children.

Cases of Marasmus are seen at different ages, sometimes as early as 3 months and continue up to pre-school age. All under-weight children are at risk, they are always in danger of easily picking up infections. These infections are more serious than in well-nourished children and can more easily lead to death. They must be protected from the immediate danger of severe malnutrition and pre-mature death.

The direct cause of malnutrition is the child not getting enough food for his body requirements but it is very important to find out why he is not getting enough.

There are many reasons: political, economic, educational and social.

Some of them depend on others, for example poverty, ignorance and diseases go together.

- Mlanutrition of the mother giving premature birth continues with lactation failure. The last three months of pregnancy and the first three month of life is the time when the seeds of later malnutrition are sown.

- After 6 months of age, mothers do not add the correct type of weaning food, nor adequate quantities of milk.

- When bad bottle feeding is introduced.

- Malnutrition is obviously common in large families when there is no spacing of children and both mothers and children are in poor health.

- Measles, recurrent gastro intestinal and respiratory infections are very important causes of malnutrition.

- Finally, nutritious food (like DSM) sold for cash, insufficient fuel for cooking, problem of safe drinking water and particular food beliefs and customs are the other causes of malnutrition in Afghan refugees.

Marasmus is a serious public health problem. There are only a few hospitals and beds available for treatment of such patients. Treatment of these children is time consuming and they can take up beds in hospitals for weeks and months and only recover very slowly. During treatment, they are very liable to suffer from infection and these may retard their progress and sometimes may prove fatal if health workers merely cure sick people. It is like giving a man a fish to eat; tomorrow he will be hungry again. If health workers help the community to care for its own health it is like teaching a man to fish. Tomorrow he may not need our help.

Nutrition rehabilitation should be the practical training of mothers. Food is the specific drug against PEM. PEM could be prevented and it is curable only if families feed their children with the food that is already available. Proper health education generally and nutrition education is particularly important. Mothers need to be encouraged to give a wide variety of foods, advice needs to be given on foods with a high concentration of energy and how to prepare them, because the main deficit in children's diets from 4 months onwards, is energy. Thus a simple concentrated energy supplement should be useful in maintaining satisfactory growth. Many traditional diets consist mainly of bulky foods. They are big in size but do not have enough nutritional value. Fats and oils are essential in feeding young refugee children. They may have a dramatic effect on their nutritional status. They are a good source of energy and make a good staple carbohydrate, for example, porridge would be softer and less water would be needed. In the past, lack of protein has been over-emphasised and much too little attention has been given to energy deficiencies. It is very important to prepare a set of weaning recipes, made up from local food.

The aim of a nutrition programme is to promote good nutrition and to eradicate malnutrition. Through nutrition rehabilitation the aim is to educate the families to ensure that the same problem is not recurring.

Appendix A

PUNJAB AFGHAN REFUGEES HEALTH PROGRAMME

Staff Positions of Health Units of Afghan Refugees Camp

Designation of Staff	Budget Sanctioned Strength	In position Staff
Field Supervisory Medical Officer.	1	1
Medical Officers.	6	6
Lady Health Visitors	6	4
Dispensers.	6	6
Store Keeper.	1	1
Lab. Assistant.	1	1
Microscopist.	1	1
Vaccinators.	6	6
Malaria Supervisors.	11	10
Midwives.	6	6
Other support staff.	22	22

PUNJAB AFGHAN REFUGEES HEALTH PROGRAMME
Number of Persons Reported at Health Units
for Treatment Kot Chandna Camp
January – October, 1986

Name of month	Male	Female	Children		Total
			0 – 5	5 – 14	
January, 1986	4506	2488	1420	2446	10860
February, 1986	3735	3921	1900	2907	12553
March, 1986	3568	4544	2207	2974	13293
April, 1986	3351	3867	2094	2268	11580
May, 1986	2538	2409	1752	1516	8215
June, 1986	2146	1592	1008	1111	5857
July, 1986	3313	2434	1656	1676	9079
August, 1986	2442	2137	1306	1489	7374
September, 1986	3332	2553	1645	1767	9297
October, 1986	4154	3312	1840	2222	11528

PUNJAB AFGHAN REFUGEES HEALTH PROGRAMME
Number of Persons Reported at Health Unit
for Treatment at Darra Tang Camp
January – October 1986

Name of Month	Male	Female	Children		Total
			0 – 5	5 – 14	
January, 1986					
February, 1986	485	262	264	439	1432
March, 1986	597	60	145	198	1000
April, 1986	557	220	246	259	1282
May, 1986	537	233	248	475	1493
June, 1986	274	93	116	198	681
July, 1986	338	196	118	280	932
August, 1986	287	36	70	146	539
September, 1986	210	68	58	196	532
October, 1986	338	131	140	247	856

PUNJAB AFGHAN REFUGEES HEALTH PROGRAMME
Attendance of Patients According to Nature of
Sickness by the Sex and Age
January – October, 1986
Kot Chandna Camp

Nature of sickness	Male	Female	Children		Total
			00 – 04	05 – 14	
Eye infection	1286	493	312	645	2736
Ear infection	434	362	656	668	2120
Upper Respiratory infection	3871	1784	1115	1914	8684
Bronchitics	3426	3365	2143	2172	11106
Diarrhoea	1669	1075	4009	2640	9393
Dysentry	441	443	213	340	1447
Worms	361	385	477	1237	2460
Other Gastric problems	3467	3080	713	925	8185
Unirary tract infection	674	153	18	44	889
Nervous system	1056	133	13	137	1339
Malaria	385	222	63	278	948
Skin diseases	4208	2750	2588	3552	13098
Anameia	3030	5104	221	849	9204
Fever PVO	2332	2785	2513	3492	11122
Joints and Bones	3158	2695	32	271	6156
Dental	197	96	08	72	373
Other	2986	2853	1313	1167	8319
referred to Hospital	–	–	–	–	600

PUNJAB AFGHAN REFUGEES HEALTH PROGRAMME
Attendance of Patients According to Nature of
Sickness by the Sex and Age
January – October, 1986
Darra Tang Camp

Nature of Sickness	Male	Female	Children		Total
			00 – 04	05 – 14	
Eye infection	113	21	30	72	236
Ear infection	41	06	36	40	123
Upper Respiratory infec.	372	113	103	176	764
Bronchitics	177	71	74	117	439
Diarrhoea	189	53	405	302	949
Dysentry	30	03	18	18	69
Worms	42	04	58	69	173
Other gastric problems	380	86	100	130	696
Unirary tract infection	71	13	07	19	110
Nervous system	57	16	01	25	99
Malaria	173	79	50	173	475
Skin diseases	473	124	174	484	1255
Anameia	323	178	235	433	1169
Fever PVO	298	184	256	444	1195
Joints and Bones	405	165	13	62	645
Dental	42	02	07	12	70
Other	245	62	47	130	484
Referred to Hospital	–	–	–	–	13

	NWFP	BALUCHISTAN	PUNJAB	TOTAL
SPECIALIZED HOSPITALS:				
	22	4	–	26
GENERAL HOSPITALS:				
	7	7	1	15
			GRAND TOTAL:	41
DETAILS OF FIELD UNITS:				
A. BHUs/SHUs (GOVT.) :	113	37	5	155
B. BHUs/SHUs (VOLAGs)	71	26	–	97
			GRAND TOTAL:	252
TOTAL BED STRENGTH OF HOSPITALS:	1120	565	20	1705

PUNJAB AFGHAN REFUGEES HEALTH PROGRAMME

Mother and Child Health Activities During
January – October, 1986

Name of Case	New Case Registered at CHU	Follow-up-done	
		At CHU (Visits)	At home (Visits)
Ante-Natal	360	337	182
Post-Natal	148	130	148
Children (For growth chart)	1029	1329	677

DELIVERIES RECORD

	Delivered at CHU	Delivered at R.H.	Delivered Home	Total
Registered for Ante-Natal services	51	03	50	104
Not Registered for Ante-Natal services	24	06	104	134
		Total :		238

Other Activities of OB & Gyn carried out at CHU

Removal of Retained Placenta	10
D&C for incomplete abortion	18
Other OB & Gyn Procedure	08

PUNJAB AFGHAN REFUGEES HEALTH PROGRAMME
Malnourishment Among Children Compared With
Age of Child and Number of Siblings

AGE OF CHILD

Grades of Malnourishment	0–6 M	7–11 M	12–23 M	24–35 M	36 + M	Total
I	18	55	85	31	05	194
II	16	35	47	13	05	116
III	06	27	12	06	02	53
Total:	40	117	144	50	12	363

NUMBER OF SIBLINGS

Grades	None	1–2	3–4	5 +	Total
Grade I	25	68	64	37	194
Grade II	14	33	44	25	116
Grade III	09	17	19	08	53
Total:	48	118	127	70	363

Number of children registered for health care services at Health Units	1029
Children suffering from Malnourishment	363

PUNJAB AFGHAN REFUGEES HEALTH PROGRAMME

Clinical Laboratory Report for Support of
Health Activities for the Year 1986

Months	Total patients subjected for Lab. Examination	Blood complete picture	Urine for Routine Exam.	Stool Exam.	Sputum for AFB Total patients	AFB positive cases
March, 1986	248	120	72	—	56	07
April, 1986	171	60	41	—	70	08
May, 1986	228	69	47	02	110	11
June, 1986	159	51	42	—	66	02
July, 1986	173	43	10	—	120	05
August, 1986	95	31	11	—	53	07
September, 1986	210	77	17	01	115	11
October, 1986	207	84	31	02	90	02
Total:	1491	535	271	5	680	53

PUNJAB AFGHAN REFUGEES HEALTH PROGRAMME

Monthwise Status of T.B. patients at T.B. Clinic
of Kot Chandna Camp

Months	Patient under treatment at the end of previous month	New patients registered during the month	Patient cured/ discharged during the month	Patient remained under treatment at the end of the month
January, 1986	252	08	–	260
February, 1986	260	17	20	257
March, 1986	257	282	04	281
April, 1986	281	10	–	291
May, 1986	291	10	431	253
June, 1986	253	04	05	252
July, 1986	252	11	07	256
August, 1986	256	123	05	263
September, 1986	263	324	14	281
October, 1986	281	15	01	295

1. 22 Patients have been transferred to different BHUs in NWFP as they migrated to cooler places.
2. 4 patients referred to Kot Chandna T.B. Clinic from NWFP BHUs
3. 2 patients referred from other centre to T.B. Clinic.
4. 15 patients who had gone to cooler places have been transferred back to T.B. Clinic, Kot Chandna.

PUNJAB AFGHAN REFUGEES HEALTH PROGRAMME

Status of Treatment of T.B. Patients
March – October, 1986

Months	Regular in taking treatment: Male	Female	Children 0-14 yrs	Total	Defaulting in taking the treatment: Male	Female	Children 0-14 yrs	Total
March	40	109	13	162	37	77	05	119
April	53	120	10	183	33	72	03	108
May	38	85	01	124	50	109	08	167
June	29	55	05	89	43	116	09	168
July	27	48	08	83	51	114	08	173
August	30	46	06	82	56	113	12	181
September	50	78	08	136	50	98	11	159
October	60	80	10	150	30	106	09	145

PUNJAB AFGHAN REFUGEES HEALTH PROGRAMME

Anti-Malaria Spray Report
During 15th July – 15th September, 1986

AT KOT CHANDNA CAMP

Total No. of dewellings sprayed	–	11,664
No. of dewelling not sprayed	–	
Closed	–	1,232
Refused for sprayed	–	426

AT DARRA TANG CAMP

Total No. of dewelling sprayed	–	1,583
No. of dewellings not sprayed.		
Closed	–	Nil
Refused for sprayed	–	06

PUNJAB AFGHAN REFUGEES HEALTH PROGRAMME

Blood Slides Examined for Malaria Parasite
for the Year 1986

Months	Total No. of slides examination	POSITIVE				Slides positive rate
		P.V.	P.F.	Mixed	Total	
January, 86	746	51	24	03	78	10.5
February, 86	430	75	16	03	94	21.9
March, 86	844	140	11	–	151	17.9
April, 86	974	142	08	02	152	15.6
May, 86	674	88	07	–	95	14.09
June, 86	518	64	02	–	66	12.8
July, 86	718	84	06	–	90	12.6
August, 86	383	37	40	01	78	20.4
September, 86	527	90	102	02	194	36.8
October, 86	1273	74	111	04	189	14.9
TOTAL:	7087	845	327	15	1187	16.7

PUNJAB AFGHAN REFUGEES HEALTH PROGRAMME

Places Reported by Migrated Afghan Refugees
for their Summer Dewellings.

	Slide Positive for Malaria Falciparum		
PLACES	September	October	Total
Chowa Saidon Shah	10	08	18
Wana Agency	32	25	57
Muhammad Khel	24	05	29
Zargai	15	14	29
Meran Shah	03	02	05
Datta Khel	–	01	01
Razmak	03	07	10
TOTAL:	87 84%	62 54%	149 68%

Total No. of slides positive for Malaria Falciparum for:—

PUNJAB AFGHAN REFUGEES HEALTH PROGRAMME

Cumulative Expanded Programme of Immunization
for the Years 1984, 1985 & 1986
Kot Chandna Camp

(1984)

		AGE GROUP				
		0-11 M	12-23 M	12-4 years	5 + years	Total
B.C.G.		367	978	1501	999	3845
Polio	I	563	1920	3586	–	6069
	II	441	1415	2276	–	4132
	III	410	1081	1756	–	3247
D.P.T.	I	563	1920	–	–	2483
	II	441	1415	–	–	1856
	III	410	1081	–	–	1491
D.T.	I	–	–	3586	–	3586
	II	–	–	4032	–	4032
Measles		292	205	1270	218	1985

(1985)

B.C.G.		447	787	2174	812	2316
Polio	I	553	1003	3202	1254	6012
	II	473	1038	2903	1244	5658
	III	343	774	2239	954	4310
D.P.T.	I	553	1003	–	–	1556
	II	473	1038	–	–	1511
	III	343	774	–	–	1117
D.T.	I	–	–	3202	1254	4456
	II	–	–	2903	1244	4147
Measles		200	606	–	–	806

(1986) January – October

B.C.G.		985	857	1684	402	3928
Polio	I	1220	1142	2491	580	5333
	II	633	750	2042	543	3968
	III	390	545	1474	489	2898
D.P.T.	I	1120	1142	–	–	2262
	II	633	750	–	–	1383
	III	390	545	–	–	935
D.T.	I	–	–	2491	580	3071
	II	–	–	2042	543	2585
Measles		448	842	33	–	1323

HEALTH CARE 1985 – 1986
(SUMMARY)

		NWFP		BALUCHISTAN		PUNJAB	
		1985	1986	1985	1986	1985	1986
1.	TB Slides+iv (Patients under treatment)	5.664	6.016	920	751	200	53
2.	EPI	1062351	844171	139047	114439	31085	13226
3.	a. Total Malaria Cases	183725	159203				
	b. Slides+iv Treatment	40820	39350	1946	1128	2307	1187
4.	Sanitation – Pit Latrines upto 1985 & 1986	70000	11098	2500	7075	3500	300
5.	OPD Treatment	2305381	2540330	716647	508250	99463	108383
6.	War Wounded	7742	16707	1069	9170	–	–
7.	EYE TREATMENT						
	a. Examined	17068	10632				
	b. Operated	2090	1044				
8.	DISABLED PATIENTS						
	a. Registered	5335	4918				
	b. Referred	2128	3089				
	c. Treated	1267	1363				

PUNJAB AFGHAN REFUGEES HEALTH PROGRAMME

Immunization Programme at Darra Tang Camp
January – October, 1986

AGE GROUPS	Total attendance	B.C.G.	Polio			D.P.T.			D.T.		T.T.		Measles
			I	II	III	I	II	III	I	II	I	II	
0-11 Months	295	385	174	93	28	174	93	38	–	–	–	–	24
12-23 Months	555	279	312	177	66	312	177	66	–	–	–	–	100
3-4 Years	1127	517	654	384	89	–	–	–	654	384	–	–	
5 + years	353	126	201	115	37	–	–	–	201	115	–	–	
Women (15–45)	22	–	–	–	–	–	–	–	–	–	20	02	–
TOTAL:	2352	1307	1341	769	220	486	270	94	855	499	20	02	124

PUNJAB AFGHAN REFUGEES HEALTH PROGRAMME

Immunization Programme at Kot Chandna Camp
January – October, 1986

AGE GROUPS	Total attendance	B.C.G.	Polio I	Polio II	Polio III	D.P.T. I	D.P.T. II	D.P.T. III	D.T. I	D.T. II	T.T. I	T.T. II	Measles
0-11 Months	2143	985	1120	633	390	1120	633	390	–	–	–	–	424
12-23 Months	2437	857	1142	750	545	1142	750	545	–	–	–	–	749
2-4 Years	6007	1684	2491	2042	1474	–	–	–	2491	2042	–	–	33
5 + Years	1612	402	580	543	489	–	–	–	580	543	–	–	–
Women (15-45)	360	–	–	–	–	–	–	–	–	–	262	98	–
TOTAL:	12559	3928	5333	3968	2898	2262	1383	935	3071	2285	262	98	1199

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United Medical Centre of
Afghan Mujahid Doctors (UMCAMD)
Peshawar.

Winter, Elizabeth
Afghanistan Appeal.

Yasmin, Dr. Farhat
Afghan Refugee Assistance Project
Haripur.

Yar, Dr. Mohammad Qayum
UMCAMD.

Zarina, Miss.
LHV
c/o PDH, Quetta.

Zeenat, Miss.
LHV
c/o PDH, Quetta.

Zaman, Dr. Qamar-uz
Programme Officer
Afghan Refugee Assistance Project
Peshawar.

Zahir, Abdul
Sanitation Supervisor
IRC, Peshawar.

Zada, Badshah
Malaria Supervisor, Peshawar.

Zaidi, Wajahat
Projects Officer,
Catholic Relief Services,
Islamabad.

Zada, Bacha
Malaria Inspector
Afghan Refugees
Bajur Agency.

WATER SUPPLY SCHEMES:

Scale : 25 litres of drinking water per day per person is envisaged.

TYPE OF SOURCES:

A. Tube wells

B. Open surface wells

C. Gravitational pumps

D. Hand pumps

E. Traditional pumps

F. Karez

G. River

H. 15% of the refugee population are sharing the water with the local population from existing sources.

J. Approximately 45% of the refugees in NWFP and 40% in Baluchistan are being provided with 25 litres of potable water per day per person.

K. A fleet of 20 water tankers is providing potable water to refugees and 5 additional tankers are being provided for summer months of June, July, August and during Ramzan.

L. UNICEF originally donated 29 water tankers to the water supply project, 26 were still operating during 1985. A fleet of 15 water tankers is providing temporary drinking water to refugees who are awaiting the completion of permanent water supply schemes.

M. Almost all the refugees in Mianwali (Punjab) are receiving 25 litres of potable water per person per day.

THE AFGHAN REFUGEE HEALTH PROGRAMME FROM THE PROVINCIAL PERSPECTIVE

DR. AURANGZEB KHAN
PROJECT DIRECTOR HEALTH
NORTH WEST FRONTIER PROVINCE

The largest number of Afghan Refugees is in NWFP *i.e.*, out of 3 Million, 2.1 Million are in this Province.

Health programme is being implemented with support of UNHCR and collaboration of various Voluntary Agencies in Ten Districts and seven Agencies.

In Distt: or Agency a Supervising Medical Officer called Field Supervising Medical Officer is appointed who supervises the field units *i.e.* BHUs/SHUs and also coordinates with the Volags working in Distt:/Agency. There are 10 FSMOs based at Headquarter of District and Agency.

There are 87 BHUs and 26 SHUs run by UNHCR. The Voluntary Agencies are running 45 BHUs and 13 SHUs.

Idara Ahya-ul-Ulum has five Mobile Units in Peshawar, Hazara, Bajaur, Dir and Kohat.

Islamic Relief Committee has got two Mobile Units – one in Peshawar Distt: for Zundai and Zangalpatti and other in Chitral for Khairabad and Kessu.

UNHCR Team working in Azam Warsak was also looking after the new arrivals at Zar Melan in South Waziristan, but from 1st Nov: Union Aid has sent a Medical Team at Zarmalan in South Waziristan.

Due to establishment of new Camps of Refugees Project Director Health has requested various Volags to establish BHUs.

One BHU at Rashakai in Bajaur.	)	By Saudi
	)	
One BHU at Shin Dhand in Kohat Distt:	)	Red Crescent.
One additional BHU at Munda in Peshawar Distt:	)	Union Aid.
One BHU at Sur pull in Kurram.	)	
	)	By Human
One BHU at Azam Warsak in South Waziristan.	)	Concern.

The Red Crescent Society of United Arab Emirate wanted to start Medical Relief work and we have recommended.

a. BHU at Qutab Khel in N. Waziristan for new Camp.

b. One BHU at Palai-II where population has increased upto 15000.

(As a temporary measure Medical Unit at Saidgi is giving Medical Cover at Qutab Khel) Iranian Red Crescent has applied for starting Medical Relief and we have suggested that a 100 bedded Hospital should be given at Panian (Haripur) where population of Refugees is about 126000.

- One Psychiatric Clinic and Dermatological Centre is established by Islamic Relief Committee in University Town, Peshawar with permission of Safron.

- One Psychiatric Clinic has been started in Shaheen Town, Peshawar by Afghan Doctor Dr. M. Azam Dad Far by permission of Safron.

- A Drug abuse Centre has been started on Jamrud Road by Dr. Rahim Pushtoon Yar and blood Bank for Afghan Refugees is going to be started by same Doctor and process of Purchase of equipment is under way.

- MERCY Fund (U.S.A.) has applied for starting a Mobile Gynae/obstetric Team in BHUs of Peshawar Distt: and the case has sent to Safron for sanction. However team has been allowed by Commissioner. The Team consisting of qualified Lady Doctor and two Nurses would visit various BHUs by a Scheduled programme and examine Female cases for Gynae and obstetric treatment and any patient requiring operation will be taken to Hospitals in Peshawar.

- Freedom Medicine has proposed to set up 15 bedded Hospital for war wounded patients at Chitral and also to set up classes for Refugee Women in Community Health Care. The case has been sent to Safron for sanction.
  (In this connection it is started that Freedom Medicine has already been given sanction for training of Para-medical staff in Thall area of Kohat Distt:)

- Union aid has applied to set up a 20 bedded Hospital at Munda Camp in Peshawar Distt: for Mother and Child Health Care and the case has gone to Govt: for sanction.
  (Here it is worth mentioning that Union aid has a general Hospital of 40 beds at Barakai Camp in Mardan Distt:)

- A Charitable organisation of U.K. *i.e.* Muslim aid has also shown willingness to help Afghan Refugees. We have proposed that this Organisation should work in Chitral by setting up two BHU and three SHUs. The already existing BHUs of UNHCR would be shifted to some other suitable places.

In the various BHUs and SHUs the staff provides Basic Health Facilities — Curative, Preventive and Health promotive activities.

The following are main activities in BHUs.

1. Curative Service and Drug supply.
2. Mother & Child Health Service.
3. T.B. control programme.

4. Malaria control programme.
5. Immunization against six Diseases.
6. Health Education.
7. Sanitation.

The patients who attended BHUs of UNHCR and Voluntary Agencies are (upto end September):

U.N.H.C.R.	1011080
Volags.	1529250
Total:	2540330

For indoor treatment there are various Hospitals run by Voluntary Agencies and Afghan Association list attached.

In addition to the Hospitals in the list treatment is also being given in Major Provincial Hospitals like Lady Reading Hospital, Khyber Hospital and Irnum and in Various District Headquarter Hospitals and Tehsil Headquarter Hospitals for which some Financial help is given to them.

There are three Artificial Limb Centres in Peshawar.

a) In Khyber Hospital by GTZ.
b) A Para-plegic Centre in Hayatabad – which was in run by the ICRC but now handed over to Pak: Red Crescent.
c) Lady Reading Hospital, Peshawar.
d) Kuwait Red Crescent Hospital, Jamrud Road, Peshawar.

In addition to these centres, Saudi Red Crescent is generously helping handicapped persons in providing artificial limbs and wheel chairs.

Joint UNHCR/PRCs Project for disabled Afghan Refugees:

Pakistan Red Crescent is managing a Centre for handicapped which is funded by UNHCR. A Medical Team who with a scheduled programme visits Camps and with help of BHU Staff Screen handicapped persons. Those who require operation are taken to Peshawar and got operation by specialists in various Hospitals and those requiring artificial limbs are provided through various centres.

Dental Treatment:

The Dental Cases are being treated in various Provincial Dental Clinics. In addition following Volags are assisting in Treatment of Dental Cases:—

1. A Mobile Dental Clinic is being run by CARITAS in various BHUs of Peshawar Distt:
2. A Static Dental Clinic is run by Kuwait Red Crescent at Jamrud Road, Peshawar.
3. A Static Clinic of Seventh Day Adventist is also treating Afghan Refugees in Peshawar Cantt.

T.B. CONTROL PROGRAMME

During early days of influx of Afghan Refugees T.B. Programme was limited to treatment at Basic Health Unit. Since 1984 the Programme has been put on regular and Scientific grounds. A Deputy Director TB Control Programme was posted. Emphasis is being laid on finding positive cases and their treatment so that further transmission and spread is controlled.

On arrivlal of Italian Cooperation for Development (ICD) the TB Control Programme has been much intensified and improved on proper Technical grounds by improved methods of case finding, standardisation of treatment regime, proper follow up and supervision.

33 Field Laboratories are operating in the Province plus one Referral Laboratory in Peshawar for Training, Counter checking, Routine checking and culture. Culture sensitivity service. A microbiologist is employed by I.C.D. for this purpose.

Two Mobile X-Ray Units are continually touring the Province together with TB specialist and Radiologist as clinical consultants.

Three Doctors of ICD team are taking care of precise data collection which is extremely important to evaluate the progress of programme by visiting each BHU every two months.

Three qualified Laboratory Technicians are supervising work of Field Laboratory Microscopists to ensure correct slide reading.

Drugs, Mobile Units, Laboratory Equipment and reagents, specialized local and Foreign Staff are provided by I.C.D. who also acts as Technical Advisor to Deputy Director Health for TB Control.

Work done in 1986 upto end of September 1986:—

Patients under treatment:

UNHCR	4638
Volags	5167
	9805

Sputum Examination

Total Slides	=Slides
37321	3160

E.P.I. Programme

A Deputy Director E.P.I. looks after this Programme. There are ten E.P.I. Supervisors, one in each Distt: and 107 Vaccinators one in each Basic Health Unit and S.H.U.

E.P.I. Supervisor is responsible for checking of proper Vaccine supply to BHU/SHU and proper storage of Vaccine and also checking of work done by Vaccinators.

There is well organised Cold Chain System in Province. There is central Cold Storage at Peshawar in Deputy Director Office which is looked after by a Logistic Officer. There are Ten Regional Cold Stores and 13 Sub-regional Stores in field. Each Vaccinator has got Cold Box/Vaccine carrier for keeping the Vaccine at proper temperature. In 1986 work done from January to end of September is given in attached list.

EPI NWFP, FIGURES OF IMMUNIZATION IN AFGHAN REFUGEES CAMPS JANUARY 1986 to SEPTEMBER 1986

BCG.	109331	1st dose	2nd dose	3rd dose	boster
Polio	28.56%	124354	91580	33932	20785
		32.58%	23.99%	8.89%	5.44%
D.P.T.		61934	46763	32522	8605
		41.75%	31.51%	21.91%	5.79%
D.T.		57492	41043	–	11451
		24.65%	17.59%		4.91%
T.T.		62523	35398	–	5425
		13.40%	7.58%	–	1.16%
Measels.	101042				
	26.47%				

MALARIA CONTROL PROGRAMME

Malaria Control Programme is given importance. A Deputy Director MCP, has been taken on deputation from Health Department of NWFP. Ten Malaria Inspectors and 107 Malaria Supervisors are working. Like previous year Malaria Control activities like Surveillance, treatment and Spray have been conducted.

In each BHU case deduction is done by taking Blood Slide for Malaria parasite from each case with fever. The slide is examined in Laboratory. If it is positive for M.P. radical treatment is given.

Year	Total Slides	Total No. of positive Slides	P.F.	SPR	% SPR of Falciparum
1985	183725	40820	1698	22.2%	.9 %
1986 Jan: to end of Sept:	159203	39350	509	24.3%	.3 %

The above data reflects an upward trend of Malaria Postivity. But most encouraging aspect is three fold disease in P. Falciparum cases.

The reason for upward trend in total postivity is:—

a) Fresh arrival of Afghan Refugees from Malaria endemic areas.

b) Relapses in P. Vivax cases.

SPRAYING SCHEDULE:

Spraying campaign was launched on 5th July 1986. Due to late arrival of spare parts from UNHCR we had to arrange local made spare parts (spare parts of UNHCR came on 28—7—86). As Malathion was received in instalments.

Ist instalment of 61.2 M.Ton in last week of June 86.
2nd intalment of 16.3 M.Ton on 25—8—1986.

therefore spray could not be started simultaneously in all camps *e.g.* Camps of SRC area and UNHCR in Haripur and some camps in Parachinar were sprayed at later dates. Second round of spray had to be cancelled due to short supply of Malathion. Due to increase in population and construction of mud houses in Camps 170 M.Tons of Malathion was demanded for two rounds, but only 77.5 M. Tons were received in two instalments.

Two days training Malaria Control Methodology was imparted to all Field Workers *i.e.* Malaria Inspectors and Malaria Supervisors on 17th and 18th June 1986 in order to refresh their Technical knowledge.

OBSERVATIONAL VISIT OF DEPUTY DIRECTOR MALARIA CONTROL PROGRAMME

M. Aziz Khan was sent to Thailand at the expense of UNHCR to study Malaria Control activities including resistance of P. Falciparum towards Chloroquine from 19th to 31st October 1986.

HEALTH EDUCATION

In all Field BHUs of NWFP, one day is specified for Health Education every week. All staff members impart Health Education to refugees male and female both.

Talks on nutrition, Sanitation and other preventive and Health promotive aspects given through Home visits by Lady Health Visitors in big gatherings and at Schools, Mosques etc. by Medical Officers and other male staff.

PRIMARY HEALTH CARE

Keeping in view the Community participation in delivery of Health system community Health Workers and Community Health Supervisors have been trained as no system can succeed without the active participation of community itself.

INTRODUCTION

We are pleased to present the Proceedings of the Annual Seminar on the Afghan Refugee Health Programme held in Rawalpindi December 3–4, 1986. The Seminar was jointly sponsored by the Chief Commissionerate for Afghan Refugees, Government of Pakistan and the United Nations High Commissioner for Refugees, Pakistan.

The purpose of the Seminar was to disseminate information about the Afghan Refugee Health Programme through presentation of papers and to serve as a forum for discussion of health issues through special workshop. This year the Seminar emphasized Primary Health Care and Health Education, Water Supply and Sanitation, and Nutrition. Those invited to attend included representatives from the Government of Pakistan-States and Frontier Regions, Chief Commissionerate for Afghan Refugees; High Commissioner for Refugees; Voluntary Agencies; international agencies and private agencies, various medical institutions including the London School of Hygiene and Tropical Medicine.

We want to take this opportunity to express our gratitude to the Seminar speakers and moderators. They are a talented group of people and were most willing to give their time and expertise to this endeavour. Much of the success of the Seminar can be attributed to their excellent contributions.

The Seminar would not have been possible without the generous assistance of many people and organizations. Their efforts on behalf of the seminar are greatly appreciated.

Also a final word of appreciation must be extended to the participants of the seminar. Many of these people travelled great distances to attend and their spirited participation made the seminar a stimulating event.

Claude J. Aguillaume, M.D., M.P.H., T.M.
Senior Health Coordinator
United Nations High Commissioner
for Refugees, Islamabad, Pakistan

Colonel Altaf-ur-Rahman Khan
Director Medical Services
Chief Commissionerate for Afghan Refugees
Islamabad, Pakistan

Save the Children Fund with assistance from UNHCR is developing Primary Health Care system with involvement of community. At present this system is being practiced in Dir, Bajaur, Haripur (Hazara), Mattani, Bedaber, Adezai camps in Peshawar District.

	Community Health Worker	Community Health Supervisor
Dir.	373	15
Bajaur.	620	24
Haripur.	180	6
Peshawar.	96	4
Under Training	1269	49

Community Health Worker and Supervisors are taken with the consultation of community elders. One community Health Worker would look after 30 families and is a voluntary worker. Community Health Supervisors is responsible for 7500 persons. Training is given to community health supervisors in Bedaber school for about 8 weeks, after training they are taken as staff of BHU and paid Rs. 800/- P.M.

Community Health Worker are voluntary. They are trained in simple methods *e.g* dressing, administration of ORS and recognition of simple ailments of pain, dirrhoea etc. CHW is given a kit containing Paracetamole, Bandages, Glycerine Soda Mint tablet etc.

Idea of CHW and CHS is to utilize their services in health education, Immunization, follow up of T.B. and Malaria cases, use of ORS and development of hygienic ways.

Austrian Relief Committee has also trained CHW in Baghicha and Gandaf. They have trained 60 CHW out of these 3 in each camps are selected as CHS and are paid Rs. 500–600 per month. They supervise the work of CHW.

Salvation Army has also started CHW programme in Ghazi and Haripur. They have got 24 staff under training which will be completed in February, March 1987.

SANITATION

Before 1986, 10 Sanitary Inspectors and 107 Sanitarians were working in our organization *i.e.* one Sanitary Inspector in office of every FSMO and one sanitarian in each BHU/SHU. In 1986 these post have been abolished due to out in budget.

Recently one Sanitary Engineer has been appointed in UNHCR Office at Islamabad.

The Agencies working in Sanitation are:—

A) UNICEF has been constructing pit latrinese in Tribal Areas with the funds of UNHCR, but since July 1986 the work has been handed over to the Pakistan Red Crescent who are

at present working in Kurram. 3698 latrines during 1986 (till August) have been constructed.

B) Austrian Relief Committed with Funds of UNHCR is working in settled Districts and have made 70,000 pit latrines since 1982 in Peshawar, Mardan, Kohat, Haripur area. From July 1986 to December 1986, 3000 new pit latrines in Koga and Shamsha too camps are planned. Besides 4000 latrines to be upgraded and 400 surface latrines are to be made in Adezai.

Teachers training in sanitation and hygienic was finished in Koga upto middle of November and would start the training in Adezai.

C) Salvation Army has also started pit latrines in Ghazi.

THE AFGHAN REFUGEE HEALTH PROGRAMME FROM THE PROVINCIAL PERSPECTIVE

DR. A. RASHEED TAREEN
PROJECT DIRECTOR HEALTH
BALUCHISTAN

As pointed out in the previous reports, Baluchistan is the largest province of the country. It is sparsely populated. The region is arid and communications are few.

The Afghan refugees are housed in 70 camps. Their registered population is about 600,000 accounting for nearly 15% of the indigenous population. Their Health is looked after in 24 BHUs (Basic Health Units) and 13 SHUs (Sub Health Units) in addition to 13 BHUs of Volags.

Some voluntary agencies also help in the health care of the refugees. For the purposes of this review these agencies have been grouped in two categories; those operating in provincial capital at Quetta, and those located in the refugee camps. The role of these agencies will be discussed in this report, but first the activities and achievements of the Project Directorate.

Health Sector of UNHCR

During the previous years the organisation was beset by various difficulties and problems and the targets set to the health sector could not be fully met. Conditions, however, improved considerably in 1986. This year, the targets were met. There used to be the chronic problem of absenteeism which has been overcome and the BHUs are now fully staffed except for Lady Health Visitors in some camps, which subject is dealt with later in this report. Communications also improved with telephonic connections for medical officers in the distant districts of Loralai and Chagai. Sanitation fared better with the introduction of the scheme of pit-hole latrines; the job was assigned to one of the voluntary Agencies, viz: the Catholic Relief Services in Zhob and Loralai districts and to AICF in Pir Alizai camp in Quetta district. The introduction of Preventive Outreach Workers (POHW) in health units has proved beneficial in the field of health education such as tuberculosis and malaria programmes and EPI. These programmes merit special mention and are dealt with as follows:—

1. **Tuberculosis**: X-rays and surveys carried out in the past suggested that the prevalence of TB among Afghan refugees was two, and in certain areas, three-fold compared with the indegenous population. This necessitated a TB control programme in 1984 which was assisted by WHO under the expert supervision of its consultant, Dr. Jan Kaleta. Greater emphasis was laid on the programme this year intensifying "case finding activities" in the health units, paying more attention to families of sputum AFB-positive, assuring regularity of treatment and tracing defaulters on home visits by preventive out-reach workers and LHVs. These measures helped in revealing many potential suspects and the defaulter rate was reduced from 68% to 2%, and even to zero in some camps.

   Due to UNHCR's budgetary restraints this year, the number of laboratories had to be reduced from 11 to 9, a number of BHUs had to be closed and some down graded to sub-units; all of which resulted in termination of the services of a large number of field workers. The vacancy

caused by the departure of the UNHCR/WHO Programme Officer for Health was also not filled up. Still, the TB programme was not allowed to suffer. The camps are regularly visited by mobile x-ray unit to screen sympotomatic cases. A central laboratory has been set up for cross-checking of slides for which the Fatima Jinnah TB Sanatorium is used as a "referral" hospital. It would be of interest to note that almost 45% out-door and 35% in-door patients treated in the TB Sanatorium are Afghan refugees. With the assistance of WHO a referral laboratory has now been established at the Sanatorium and provides the culture and sensitivity facility. The WHO also helps with laboratory equipment and TB medicines. The Programme is running quite satisfactorily along WHO's guidelines in the Govt; run BHUs but there is some hitch in this campaign in the BHUs, administered by the voluntary agencies. They will be discussed in the chapter on the performance of voluntary agencies.

Dr. Jan Kaleta again visited Baluchistan this year. He stayed for about seven weeks to evaluate the work done so far and to consider expansion of the programme. In the course of his visits the doctor also very kindly conducted training of field staff at district levels. I would like to state that success of the programme is mainly due to his dedication, motivation and constant support.

2. **Malaria.** Anti-malaria spraying is done periodically but the supply of insecticide proved inadequate and its quantity may have to be increased. Blood smear of suspected cases and its processing is conducted at the health centres as also by the Preventive Health out-reach workers on house visits. As mentioned elsewhere in this paper, the malaria staff retrenched this year should be restored and whole time malaria officer appointed.

3. **Immunization.** EPI activities were intensified during 1986. Heretofore, the Project Directorate used the facility of Government's cold rooms for its requirements but this facility was no longer available to the Project Directorate due to the Government's own programme and of the inadequacy of cold-chain equipment. In June 1986 the Directorate had, therefore, to establish its own independant Provincial cold room and two more cold rooms in Surkhab and Pir Alizai camps were added. Earlier a voluntary agency, the AICF, was also contributing to this programme. District level cold rooms were already functioning at Zhob, Loralai, Dalbandin and Muhammad Khel camps which have now been re-equiped. In addition, seven 'static' centres were opened at Katwai and Spedar camps in Zhob/Loralai districts, Posti, Amri and Pishuk camps in Chagai district and Saranan and Naurak camps near Gulistan in Pishin district. In BHUs and SHUs where static centres could not be opened for lack of equipment and of inaccessibility to established centres the EPI is conducted via "outreach" facility. The far-flung camps and scattered clusters of refugees in camps at Umarchah in Chagai district, Jaggi Farrakhi and Killa Haji Khan in Pishin district and camps close to the border, such as Macukach, Abshar, Durra and others near Chaman, are served by mobile teams. In one camp (Killa Haji Khan) 95% coverage has been achieved, the over-all coverage being in the neighbourhood of 75% and expected to be 80% by the close of the year. Crash programmes had to be carried out for new arrivals in Muhammad Khel and Malgagai camps in Quetta and Zhob districts. Training of the staff was conducted in March and November last at the provincial level and from time to time for the staff at district level.

Problems. The Project Health Directorate still had to face some problems. The first was that of staff. In 1986 the categories of district Sanitary Inspectors, Malaria Supervisors, Nursing Orderlies, Motivators, Laboratory Technicians and Midwives were altogether abolished. This

reduction adversely affected efficient performance in the health sector, especially the withdrawal of Midwives. However, it may be stated to the credit of the remaining medical staff that by their devotion and long working hours they did not allow the health of the refugees to suffer seriously as a result of the drastic Cuts. Still, the resentment of four score employees rendered jobless had its repurcussion which added to the difficulties of the management in this turbulent region. The number of BHUs was reduced from 40 to 24, with 13 down gradded to SHUs for clusters of small camps. None of the SHUs have been provided with a medical officer and they have no proper medical facilities. In case medical officers are not considered justified for sub-units, at-least one doctor may be provided for a group of two or three SHU so as to extend health cover to all.

Then there is the problems of LHVs and midwives. It may be explained that, in the peculiar conditions of this region, the two categories are inter-dependant; the midwife cannot function efficiently on her own without the professional guidance of the LHV, and the later cannot do without the help and company of the former.

It is therefore necessary that the cadre of TBA/mid-wife be revived. As for LHVs it has been very difficult to recruit them locally, this trade being scarce in Baluchistan, and they have to be imported. In the refugee camps in the remote areas situated at considerable distance from the camps, the LHVs, unlike their counter-parts in the NWFP who commute daily to towns, are expected to live in the camps and this they are reluctant to do without a female campanion in this case the midwife. The LHVs have also to be lured with some monetary incentive to work in the remote camps. It is recommended that they be paid an additional Rs. 500/- per month.

Provision of a Lady Doctor:
Since the very inception of Health Service for refugees the need of a Lady Physician has been felt all along. For reasons well known, the population of women in the Camps is larger than their men folk. A Lady Doctor should be provided to supervise the work of LHVs, as in NWFP and the Punjab.

Lastly, there is no Malaria Control officer in Baluchistan. The Assistant Director TB Control supervises malaria operations in addition to his own duties. As malaria is rampant in refugee camps, a whole time Malaria Officer is justified. Moreover, the posts of Malaria Supervisors abolished this year should be restored to control effectively the high incidence of Malaria among the refugees.

2. Voluntary Agencies.

As stated in the beginning, there are two groups of these agencies; those located in Quetta and those operating in the refugee camps. The first consists of:—

1) ICRC Hospital for war wounded-60 beds.
2) SRC Almukarama Hospital Quetta — 100 beds.
3) SRC Alsalam Hospital Saranan — 72 beds.
4) Alkhidmat Hospital — 24 beds.
5) Ansari Hospital — 50 beds.
6) Zubair Shaheed Hospital — 60 beds.
7) Al-Jehad Clinic.

As the Project Director is concerned mainly with the second group operating in the refugee camps the Project Director will confine himself to discuss the activities of this second group. These agencies are:

1) AICF (Action Internationale Contre la Faim)
2) CHREP (CHRISTIAN Hospital Refugee Extension Programme)
3) MSF (Medecins Sans Frontieres)
4) SRC (Saudi Red Crescent)
5) OHI (Operation Handicap Internationale)
6) CRS (Catholic Relief Services)
7) KRC (Kuwait Red Crescent)

With the exception of No. 5(OHI), which is running a rehabilitation centre for handicapped from the camps, and No. 6 CRS engaged in health education and sanitation programme in Loralai and Zhob districts, some of the other agencies are operating in camps proper.

Before discussing the role of these agencies the Project Director would like to express on his behalf, and on behalf of his medical officers, their appreciation of the good work done by these agencies in relation to the health care of the refugees.

And now a few words about the activities of each voluntary agency of the second group:

1) **AICF**: The agency is running two BHUs at Surkhab and Pir Alizai out of the nine run by Government in the two camps. Its activities are confined to the health care of women and children only in the two units, leaving the male population uncovered. The agency has opened a laboratory at the Pishin Rural Health Centre and on one occasion imparted training in microbiology to the microscopists and dispensers. It is suggested that Government take back administration of the two BHUs and require the agency to concentrate on health education by opening training centres for doctors and para-medical staff and conduct regular training courses and workshops, which service is considered more beneficial in the long run than the running of two BHUs.

2) **CHREP**: This agency, formerly known as IAC (Inter Aid Committee), operates two BHUs in Muhammad Khel camp of Quetta district. The agency is also providing health facilities for refugees in the Quetta Mission Hospital. The agency's cooperation and help is greatly appreciated. However, it is short on implementing tuberculosis and malaria control programmes. The recording and reporting system needs improvement. There is also room for improvement in running TB and malaria control programme along WHO's guidlines.

3) **MSF**: This organization was allowed to be introduced in Chagai district on one year contract which is about to run out. Its charter was to provide maternity and child health care and treat female patients in the four BHUs of the agency's own choice. In view of non-availability of LHVs in this area, the agency were to engage a lady gynocologist, some expatriate nurses and other female staff. On arrival, the team was found to consist of a male doctors as supervisor, a lady doctor, an administrator, a sanitation engineer and two nurses. The agency then asked for transfer of administration of all four BHUs with its staff and logistics. With the consent of the UNHCR the proposal was approved but the chronic problem of absence of LHVs, and therefore lack of direct attention to female patients, persisted. The situation has now eased to some extent by hiring two TBAs in place of LHVs from amongst the refugee women, and by supervision of the four BHUs by female expatriates.

4) **SRC**: This agency has established a mobile surgical hospital (AL-SALAM) at Saranan camp and runs four BHUs at Surkhab, Muhammad Khel, Malgagai and Pir Alizai. As mentioned earlier in the context of agencies located in Quetta city, this agency is operating a 100 bedded surgical hospital (Al-Mukaram) which is treated as a "referral" hospital. However, its coordination with the local health Directorate leaves much to be desired. One reason for this unsatisfactory state of affairs is the constant change of its local Directors and of the Incharge doctors of the BHUs every three or four months. Again, due to the agency's peculiar security arrangements, our FSMO and visitors from the UNHCR cannot find ready access to the BHUs to check the implementation of the various health programmes.

On his recent visit the WHO's Dr. Jan Kaleta observed that the TB control programme was not being run along WHO's guidelines and the staff in the BHUs need training in TB and malaria control and in EPI, who should be familiarised with 'case finding' procedure and with imparting health education.

While discussing this agency, it may be mentioned that UNHCR closed its BHUs where the SRC had opened its own health centres. It was observed that health delivery programmes, in particular TB and malaria control and the EPI, lagged considerably and refugees in the camps were deprived of essential health care. The project Directorate of Health was therefore obliged to re-open its BHUs in the two camps at Saranan and Muhammad Khel. It is necessary that all essential components of primary health care, including EPI and the TB and malaria control programmes, are paid due attention along Govt's and the WHO guidelines. Their closer co-ordination is imperative. The frequent changes of the agency's officers may be avoided as far as possible. Still, the help of the agency is appreciated.

5) **OHI**: The service rendered by OHI is most valuable and laudable. It is running a rehabilitation centre for handicapped refugee and has extended its help to the local population also. The Agency's representatives visit camps and select cases for prosthesis and rehabilitation, all without charge. Stimultaneously, the agency is imparting training to local nurses and others in physiotharapy and prosthesis.

6) **CRS**: This agency was introduced in Zhob and Loralai districts for the calendar year 1986 to improve sanitation and impart health education. For the success of its activities the Project Director extended it all help by providing medical staff, transport and accommodation. The agency selected one FSMO from Health Project, an experienced medical officer and one LHV. Accommodation was provided in Zar Karez camp for the staff in Loralai district and at Muslim Bagh for the staff in Zhob district. A Jeep and two other vehicles were placed at the agency's disposal for the use of its officers.

With the active help and co-operation of the Govt: health staff in the camps the programmes are now progressing satisfactorily and the target of 7000 pit-hole latrines has been achieved.

At one stage, in May last, when the programme was being implemented, there was a move to transfer all health centres in the two districts to the charge of the CRS. This was also reflected in the revised budget for 1986, but the proposal did not materialise being unacceptable to the local authorities.

The role of the CRS in the field of sanitation and health education has been of great help. It is suggested that on completion of its present assignment the agency shift its activities next year to Muhammad Khel in Quetta district and to some camps, such as Killa Haji Khan and Jaggi Farrakhi in Pishin district and to camp Darra near Chaman. The agency might also assist in establishing training centres for staff in BHUs and SHUs.

7) **Kuwait Red Crescent KRC**: This agency is running only one BHU at Chagai in the district of that name. The Health Directorate is experiencing the sort of problems with this Kuwait agency as with the Saudi's Red Crescent in the way of lack of closer liasion and coordination, proper training of the staff and running the health programmes along prescribed guidelines.

Finally, in the context of voluntary agencies, the Project Director would like to emphasise the advisibility and desirability of maintaining uniformity in methodology and strategy along Govt's and the WHO's guidelines. The disparity in the strength, emoluments of the staff, *vis-a-vis* that of Govt: employees, may be mentioned particularly as it might give cause for resentment and discontent.

The conclude, it may be stated with satisfaction that, on the whole the health condition of refugees in camps in Baluchistan improved considerably during 1986. This was also observed by WHO's Dr. Jan Kaleta and the UNHCR's Senior Health Co-ordinator. I once again take this opportunity of appreciating the help and services of the voluntary agencies.

During the year there were some instances of murder and kidnapping of some health employees by miscreants from across the boarder. The kidnapped have since been released. These incidents, understandably, created a sense of insecurity in the staff, especially of those working in camps along the border.

THE AFGHAN REFUGEE HEALTH PROGRAM FROM A PROVINCIAL PERSPECTIVE

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In Punjab there are two Afghan Refugees Camps located at Tehsil Isa Khel, District Mianwali. The one at Kot Chandna is about 11 Km from Kalabagh, the other is located at Darra Tang which is about 15 Km from the town of Isa Khel and about 50 Km from Kot Chandna Camp. According to the registration statistics by the end of October, 1986, the population of Kot Chandna Camp was about 113,000 and at Darra Tang Camp 15,000. Darra Tang Camp was established in December of last year, the population of this camp has gradually increased to about 15,000.

The Afghan Refugees at both the camps have been provided curative as well as preventive health care through the health units working under the supervision of Field Supervisory Medical Officers. The BHUs of Kot Chandna are located in constructed buildings with adequate facilities. The BHU at Darra Tang has been functioning in a tent. However, a building for a BHU was constructed at Darra Tang recently. But as yet it has not been handed over to the FSMO/DA by the PWD. It is hoped that by the end of November, the health staff will start functioning in the newly constructed BHU building.

At Darra Tang, one dispenser and a vaccinator were permanently posted for carrying out the health activities of the Camp. A doctor with a LHV had been visiting the Camp once a week from the very beginning but as the population increased, the visits by the doctors were increased. Since July, 1986 a doctor and a LHV have started visiting the BHU of Darra Tang on alternate days. The Lady Doctor also visits this BHU on a weekly, sometimes a fortnightly basis.

According to the sanctioned strength of the health budget, the staff of health units remained adequate through out the year. The staff positions of the health units are reflected in Appendix A.

Most of the health unit staff including doctors have learned Pushto and Persian languages and now they can communicate fairly well with Afghan Refugees on their health problems and the medical treatment.

Similarly other facilities were also provided according to budget provisions. Health staff participated in all the training programmes organized by the UNHCR.

During 1986, the MCH services were organized, a proper Labour Room was established at CHU for deliveries and for other OB & Gyn procedures. Important health statistics were collected to evaluate the effectiveness of MCH services.

Similarly a T.B. Clinic was re-organized for proper diagnosis and monitoring of treatment of T.B. patients.

A Clinical Laboratory was established at CHU for carrying out routine lab. examinations particularly for sputum examination for AFB. A trained Lab. Assistant was employed in the month of January, 1986 who works under th supervision of FSMO and M.O. Incharge of the T.B. Clinic.

During this last year, a microscopist carried out the examination of blood slides for MP at CHU. He was supervised by the Medical Officer Incharge Malaria Control Programme of the Camp.

ACTIVITIES OF HEALTH PROGRAMME:

The health programme activities for both the camps are carried out by staff of BHUs under the supervision of the FSMO.

The attendance of Patients is computed according to the locations of the camps *i.e.* Kot Chandna and Darra Tang separately.

Appendices B and C reflect the attendance of patients by months while Appendices D & E reflect the attendance of patients according to nature of sickness. Adequate medicines were made available through out the year and the patients were provided the proper treatment. However, some of Afghan Refugees have sought treatment from Afghan and local quacks. Doctors of health units treated cases of injection sepsis and other complications created by these quacks.

The higher incidence of common ailments for example, skin infections (mostly scabies) diarrhoea, indigestion, and upper respiratory infections is related to poor personal and food higiene. This year attendance of female patients and children has increased due to availability of 2 female doctors.

Since adequate numbers of doctors were available for the provision of health services, each doctor, besides his routine duties, was also entrusted with supervision of preventive health services such as Malaria Control Programme, TB. Control Programme, MCH Services and Immunization Programme.

The following health services were provided through the health units:—

MCH SERVICES:

MCH Services were organized. A Labour Room was established in the CHU with adequate facilities, including 24 hour attendance of a LHV and a Lady Doctor on call.

Pregnant mothers were encouraged to get themselves registered for ante-natal and post-natal services when they visited the health units as well as when LHVs made home visits. Mothers were also encouraged to register their children (05 years) for child health care services.

The follow-up programme for MCH services including the home visits was developed for motivating the mothers to attend the health units alongwith children for MCH services and documenting the home deliveries for post-natal services. Kot Chandna Camp was divided into 4 sectors assigning one LHV to each sector for home visits.

The women who delivered at CHU were given regular follow-up visits at their residence by the LHV who delivered or assisted in the delivery conducted by the doctor.

All the pregnant mothers, at their initial registration, are checked for HB, BP, Urine for Albumin and sugar, etc. plus the perabdomen examination. Tetanus Toxoid immunization was also provided to pregnant mothers. The response to immunization was not very encouraging as some of them refused to take T.T. shots in spite of reassurance. Appendix F reflects the activities of MCH services.

In child care services 1029 children were registered for health care; out of these 363 children were under-weight and suffering from malnourishment. Appendix G reflects the grades of malnourishment with number of siblings and age of the child.

Only 53 children were found suffering from frank malnourishment at the time of their registration due to poor general hygiene and frequent attacks of diarrhoea. Such children were provided with high protein biscuits and their ailments were treated.

TUBERCULOSIS CONTROL PROGRAMME:

A T.B. Clinic was reorganized and one Medical Officer was made incharge of the Tuberculosis Control Programme. Monthly reporting form of the programme was improved in order to have proper monitoring of patients.

As already mentioned, a clinical laboratory was established at CHU for the proper diagnosis of T.B. patients, particularly for sputum examination. Patients reporting at Basic Health Units with signs and symptoms suggestive of T.B. infections were referred to the T.B. Clinic for investigations. These patients were examined by the M.O. Incharge and the sputum was examined for AFB. During the year 680 sputum slides were examined out of which 53 were found AFB positive as reflected in Appendix H.

The Laboratory investigation was carried out according to guide lines of the T.B. Manual prepared by UNHCR. AFB negative patients suffering from cough and fever for more than 2 weeks were referred for chest X-Ray.

The patients with confirmed T.B. were given anti-tubercular drugs. The treatment regime was followed according to UNHCR treatment guidelines. Adequate (all types) anti-tubercular medicines were made available to the T.B. Clinic for the treatment.

A proper record was maintained for T.B. patients in which all the relevant information was documented and investigation reports were kept. M.O. Incharge conducted the T.B. Clinic for 3 days a week at CHU and for the other 3 days he spent, alongwith his staff, in the field tracing of defaulters and for motivation-meeting with elders and Maliks emphasizing the importance of continued anti-tubercular treatment and health education on preventive aspects of this disease. Appendix I reflects the monthwise status of the patients registered in the Clinic and Appendix J reflects the month-wise treatment status of the patients. The defaulting rate was high in summer months when about 40-50% of the population migrated to cooler places. Attempts were made to transfer the cases to BHUs of NWFP for continuing their treatment during the summer.

To reduce the defaulting rate, some incentives and dis-incentives were used. Patients who had been taking Anti-tubercular drugs regularly were presented blankets through their RTVs as an incentive. Defaulters were traced and their ration pass numbers were given to VAs as warning to withhold their ration till they collected their medicines form the clinic.

SURVEILLANCE OF T.B. PATIENTS:

The objectives of the T.B. Control Programme are to break the chain of Tuberculosis transmission and to reduce the tuberculosis problems among Afghan Refugees. With a view to achieving these objectives, Medical Officer Incharge T.B. Programme started surveillance in March, 1986. AFB positive patients contacts were traced out and screened for sputum AFB and other required investigations. During the period 143 contacts (63 Male & 80 Female) were contacted out of which 11 contacts have been found with AFB positive sputum. These positive cases were registered for the treatment.

It is a difficult job and requires more resources and energy for proper and adequate surveillance.

MALARIA CONTROL PROGRAMME:

The activities of the Malaria Control Programme are carried out by the Malaria Supervisors with laboratory support under the supervision of Medical Officer Incharge of the Programme.

During the months of July-September, 1986 anti-malarial spray was carried out by the Malaria Supervisors, each of whom was provided with temporarily recruited labours. The anti-malarial spray was supervised by the M.O. Incharge of Malaria Control Programme. Appendix K reflects the anti-malarial spray activities of both the Camps. Anti-malarial spray was carried out according to a plan prepared for this activity which includes the refresher training of Malaria Supervisors.

Blood slides were prepared for patients with history of fever, both at BHUs and in the field. The positive cases and their families were followed up for treatment and blood slides were examined by the microscopist.

A total of 7087 slides were prepared up to 31st October out of which 1187 were found positive. The cumulative SPR is about 17%. Appendix L reflects monthwise slide positive rate. The highest incidence of Falciparum was found in the months of September and October 1986.

Last year, a similar pattern of higher incidence of Falciparum was observed among refugees who migrated in the summer to cooler places. This year special care was taken to document the summer dewellings of migratory refugees suspected with malaria. Appendix M reflects places of contact of Falciparum.

As during the last year, this year too the positive cases of Falciparum were particularly followed-up and radical treatment was given to the patients and preventive treatment was given to families and neighbours and their blood slides were prepared and examined.

IMMUNIZATION PROGRAMME:

Immunization programme was carried out in the field by mobile teams of vaccinators under the supervision of the FSMO. However, some of the immunizations were also done in the MCH Clinic.

The activities of EPI for 3 years is reflected in Appendix N. The target population for Immunization (0-5 years) became 18000 by the end of October, 1986. A total of about 10,000 children have completed the B.C.G., Polio and D.P.T. vaccinations. The coverage of population is not very encouraging because we have not achieved the target of covering 75% target population for Immunization. The activities of EPI at Darra Tang and Kot Chandna for this year are reflected separately in Appendices O and P.

Attempts are being made to re-organize the Immunization services in order to reduce the defaulting rate and improve the coverage of the target population.

The Immunization of pregnant mothers for Tatanus Toxoid is also not very encouraging, as only 282 pregnant mothers received the first dose and 100 received both the first and second doses.

ESTABLISHMENT OF REFERRAL HOSPITAL:

For indoor treatment of Afghan Refugees, an 80 bed Referral Hospital was established at Civil Hospital, Kalabagh with the assistance of L.R.C.S/P.R.C.S. The hospital became operative in August, 1986 and has been providing diagnostic facilities as well as hospital treatment to Afghan Refugees. Local population is also being benefitted by this hospital.

BUDGET AND EXPENDITURE:

The funding for the health activities during the year is from UNHCR. A total budget for the health sector was Rs. 2.9 million out of which Rs. 2.1 million were released upto 30th September, 1986. Till 31st October, 1986, a total expenditure of Rs. 2.3 million incurred on the health sector.

The expenditure incurred according to the sub-heads of the budget. About Rs. 700,000 were spent on the purchase of medicines, Rs. 25,000 were spent on the purchase of furniture and equipment and Rs. 10,000 were spent on the purchase of reagent and other materials for the health units.

The rest of the expenditure was incurred for salaries, allowances and other operational activities.

HEALTH STRATEGIES FOR 1986-87

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1. SIMILARITIES AND DIFFERENCES WITHIN THE AFGHAN REFUGEE HEALTH PROGRAMME

A. SIMILARITIES

The Afghan Refugee Health Programme (ARHP) includes many similarities of the development of a Public Health Programme in the developing world. That is including all the public health specialities, economics, social sciences, planning and management and a rather broad understanding of ecology. We know that death rate falls dramatically when nutrition, environment (sanitation), socio-economic conditions and health care improve.

1. The common causes of death in the camps are similar to those of developing countries and occur mainly in children under 5 years of age. Our largest component of health problem, as witnessed in the BHU statistics is the Pneumonia Diarrhoea Complex.

The diarrhoeas are caused by viruses, bacterias and parasites which are so important and numerous in the refugee villages that they defy easy control. This is the result of poor sanitation, hygiene and the lack of environmental safeguard protecting water supply from unhygienic disposal of human waste.

Similarly the Pneumonia part of the complex is not the sharply definable group of Pneumonia that we so readily define and diagnose in adults, they are a number of range of upper and lower respiratory infections acute or chronic, exacerbated by the socio-ecological conditions.

Recent field experience (C. Taylor) has shown that oral rehydration at home when diarrhoea starts and permitting health auxiliaries to diagnose respiratory infections and start pencilline promptly can reduce overall child mortality by as much of 50%. As in many developing countries, the refugee villages are subject to wide spread endemic diseases whose distribution depends on local ecologic and sociological portion such as malaria and tuberculosis. Similarly, common nutritional dificiencies take a severe toll on health among the poor. Avitaminosis A and iron deficiency anemia affect large number of mothers and children in the camps.

2. Synergism between infection and malnutrition

Even though infection and malnutrition are important separate problems, the greatest health problem in the camps as well as in developing countries is the synergism between them; these interaction are responsible for one third of the mortality and morbidity of infants and children and cause severe retardation of physical growth and psycho-motor development.

"An infant born to a chronically malnourished mother starts with a poor nutritional reserve and low birth rate, then breast feeding maintains relatively acceptable development for the next 4-6 months; then because of the inadequate and inappropriate weaning food and practices, the infant nutritional status deteriorates. At the same time, he is exposed to increasingly overwhelming diversity of pathogenes at a time when passive immunity from the mother is declining; with each infection and diarrhoea, nutritional status deteriorates and this cyclically impairs resistance to infection.

3. INTERACTION BETWEEN HEALTH AND DEVELOPMENT

As in the developing world, improvement of health has important interactions within the total socio-economic development in the camps. Health has always been considered as an important part of the quality of life and an important part of development; but in economic terms, health is considered as a consumer good, not a production good.

It is almost certain that health can contribute to economic and social development and should appear as a priority in public expenditures. But health is also linked with population and increase in birth rate. Current thinking therefore recognizes that development is an insepable complex of economic and social forces--in a way a combination of health, child spacing and nutrition.

B. DIFFERENCES IN THE AFGHAN REFUGEE HEALTH PROGRAMME

1. A changing programme: From curative to Preventive Medicine

The Afghan Refugee Health Programme started as a response to a humanitarian situation. The initial relief efforts were to provide health care on an emergency basis and since 1979, the government of Pakistan with the UNHCR assistance helped to establish a medical infrastructure of over 200 basic health units throughout the areas where the refugees were and are authorized to settle. It is a changing programme. It is growing simply by the fact that the Afghan refugee population is growing. New arrivals necessitate the development of new BHUs. Presently the programme serves a population of approximately 2.8 million refugees; tomorrow it may serve 3, perhaps 4 million people. Flexibility is required in all these changes.

2. A Complex Programme

This programme is also unique by the variety of ethnic groups, languages, geographic and social differences it involves. We all have witnessed the difficult attitudes and customs towards health in the camps, women conditions, and children education and as health workers and health promoters, we all have to be aware of these factors when we serve this needy population.

3. A True International Programme

This programme is different because it involves a host government, the government of Pakistan, with the help of multinational agencies namely UNHCR and other specialized branches of the UN family: UNICEF, WHO, ILO. Participation directly or indirectly to financing the programme is extremely important, here we name the European Economic Communities (EEC),

number of foreign Embassies and delegations. Finally voluntary agencies, well represented here are close to the number of 50. They bring their expertise and a mosaic of unestimable personal values and motivation.

II. THE AFGHAN REFUGEE HEALTH PROGRAMME AND ITS PROBLEMS

Despite the difficulties in monitoring the programme, that is the long distances separating ar villages and headquarters, resulting in communication difficulties, water shortage, severe climate and difficult physical locations, constant new arrivals and overwhelming bureaucratic procedures, there is a sound health programme which has acquired an honorable reputation throughout the years.

The programme has recently improved in its structure and coordination. As you know the health unit at UNHCR has been reinforced by a sanitation engineer and a nutritionist. Health coordinators are supervising the NWFP and Baluchistan area and are coordinating with their government of Pakistan counterparts. In certain regions, voluntary agencies have started informal meetings. The programme which was mostly of the "Vertical Type" is starting to become integrated horizontaly.

Although the programme is specific to Afghan refugees, it is important that there is a coordination and an exchange of information within all the Secretaries of health through regular meetings. A continuing education programme, specific seminars and training sessions, development of health education materials in appropriate languages are underway. Delegation of power is given to the FSMO in their region and to the medical officers in their BHUs. All these factors are starting to show some results and I can tell you that the quality of care is relatively good compared to similar programmes in the developing world.

The 1986 CDC survey revealed that health indicators have improved. Infant mortality has decreased slightly. So has the number of children whose weight were deficient. The reports in 1985 showed that the BHUs were well attended with almost two and a half million of outpatients visits in the GOP/UNHCR BHUs; of which 17% were from children 0 to 4 years old. For all age, as I said earlier, the leading cause of these visits is the respiratory infection-diarrhoea complex comprising 20% and 13% respectively. But these figures are higher for children 0 to 4 = 26% for respiratory infection and 24% for diarrhoea. Also 33% of the total visits for all ages were due to diarrhoea, anemia and malnutrition.

The vaccination and EPI programme is well in progress. The cold chain, a cooperative effort between GOP/UNICEF and UNHCR has very little defficiencies. Vaccines are supplied regularly but there is a need to go and outreach the community. Emphasis should be given to tetanus toxoid for mothers in child bearing age, and the sruvey noted that there is a higher rate of neonatal tetanus. Agencies' coordination is a must in this matter. The TB programme has improved enormously and Dr. Jan Kaleta, W.H.O. TB consultant (present here) noted very little defaulters in GOP/UNHCR BHUs. However, the TB programme needs to be coordinated among voluntary agencies. The sanitation programme is increasing in its activities but is too sporadic. Modest achievements have been made in the quantity of the water available to the refugees and in the number of sanitary disposal facilities. The water has been provided through the tube-well/percolation well schemes operated by the public health engineering department (PHED) of Pakistan.

Shallow well construction and improvement are provided by diverse voluntary agencies and use of water tankers. Sanitary disposal facilities have been provided by the construction of ventilated-improved pit privies in areas with good soil structure and the establishment of surface latrines in areas with hydrogeological problems. It is estimated that over 100,000 VIP and surface latrines have been constructed today. Our records show that 70-75% of the refugees have adequate water supply 20-25 liters per day) while about 25-30% have adequate sanitary disposal facilities. Operation and maintenance of these systems have been monitored by sanitarians attached to the basic health units.

The TB slide checking gives reasonably good results, but they do need to be evaluated for double checking. The storage of drugs and drug registration could be improved and standardized. The drug list has been finalized this year. OPD statistics exist in all BHUs but they need analysis and evaluation (accuracy of diagnosis etc.) family cards are being introduced in certain BHUs. There is still a problem with registration of births, which has an effect on early children attendance to BHU services and overall, in the infant mortality rate, child immunization and growth monitoring.

Although there is an attempt to definitely make the shift from curative medicine to preventive medicine, curative medicine is the number one activity and more outreach preventive programmes are needed. Staff at all levels should take active participation in community development, in outreach activities and all evaluation aspects of the programme, but this is depending mainly on staff involvement, training and motivation.

Finally staffing remains one of the main difficulties especially for female staff. Security protection, distances, loneliness, overtime and overnight duties have discouraged some members of our health team, and I am specially concerned about the staffing of LHV who are doing a supperb job and who are presently missing in many BHUs.

III. STRATEGIES FOR 1986-1987

The Afghan Refugee Health Programme is now 7 years of existence. Seven years is bout half a generation. Babies born in the first camps are now 7 years old, a time when they should go to school, learn about hygiene and health education. In a few years, they will reach reproductive age, an other concern for the health community. In every community (and health is no exception) resources are limited and demands/consumption is always increasing. Therefore we, as a programme should focus our efforts in a few priorities. We suggest this year that the priorities are the following:

A. Uniformity of the Afghan Refugee Health Programme

It is obvious that a programme of this magnitude requests a certain uniformity. Although pilot experiences could sometimes be beneficial and if successful replicated, it is off paramount importance that all agencies involved should be in tune for all major aspects of the programme. For our part, UNHCR and the government have been collaborating very closely, so that there are no double standards not only within the other BHUs of the national government but also with the voluntary agencies themselves. These areas should be given priority: standardization of care, of drug list, of training, of materials, standardization of staff, of salaries, of hours. Coordination

of efforts. Private organization could organize themselves and share night duties with GOP/BHUs. Experiences (positive as well as negative) should be shared. In other words we would rather see complimentarity rather than competition in this programme and believe me there is room for everybody. Uniformity also in the horizontality of the programme; I mean by horizontality the integration of all primary health care activities. Achieving an appropriate balance between categorical programme (such as TB, Malaria, EPI) and comprehensive care is one of the most difficult challenge in health planning.

B. **Preventive Versus Curative Medicine**

As I mentioned in the first part of my presentation, 50% of infant mortality could be prevented by curing the diarrhoea-pneumenia complex. In certain cases up to 90% of diseases could be prevented by education and community development. We would like to see the programme taking a turn into that direction. You know that it is better to provide someone a rod for fishing than giving him fish for a limited time. The same applies for health. Our "Client" becomes "Consumer". We want to make them aware that preventive medicine is part of the over all development. But preventive medicine is a more long term approach. Evaluation can be determined only after a few years and it may less glorious to outreach the community than curing diseases with a white coat--diseases which can all be preventable.

C. **HEALTH EDUCATION**

Priority well be given to health education programmes. GOP staff as well as voluntary agencies should receive continuing education sessions. These sessions could be conducted on the job, in seminars or in meetings. Staff knowledge should be assessed and evaluated. Curriculum should be revised. I call all the participants of this programme to make a special priority for health education. I invite medical officers-dedicated medical officers-to outreach the community they work in and meet with the village leaders, to spread public health messages through the religious leaders, to invite the teachers to the BHUs, explain them what the programme is doing and encourage them to send children for immunization. Why not develop a programme for teachers? Why not teach and promote home gardening? Local partners should be in charge and should take responsibility for contacting official and political entities.

D. **MATERNAL & CHILD HEALTH – MCH**

MCH should remain a priority. The future in the refugees remains in the health of their babies. Intensification of the EPI with special emphasis on tetanus; education of the mother for breast-feeding and weaning periods; nutritional awareness and feeding centres should be encouraged. Oral rehydration therapy should be widely emphasized and home solution be taught at BHUs. Growth monitoring should be standardized. Finally we may want to teach child spacing. In one camp survey, it has been found that 48% of the women in child bearing age are pregnant. We, as health professional do know that spacing, timing and number of births a woman has are important to both her health and that of her children. Infant mortality decreases when intervals between birth increase.

E. **SANITATION**

Our objective for 1986-1987 will be mainly:

i) To establish technical guidelines for the design, operation and maintenance of water-supply and sanitation systems for the refugees.
ii) To ensure that operation and maintenance are given the same priority as construction of water supply and sanitation systems.
iii) To ensure that all sanitation activities are fully integrated within the overall Afghan Refugee Health Programme (ARHP).
iv) To liaison with the government of Pakistan, the World Health Organization (WHO) and different implementing partners so as to ensure cohesiveness of the programme ENA avoid potential duplication or conflict.
v) To organize workshops and training seminars for environmental health workers in order to disseminate information and update their skills.

F. STAFFING

Staffing remains a priority and an important one. Human resources well adapted, qualified and trained are "sine QUA NON" to the success of a health programme such as this one. Staff should be active and not passive, taking interest, pride and honour in serving the community. Solutions arise in an attempt of solving problems, not complaining all the time about them. Support your staff, your FSMO, your medical officers. Support them, encourage them in their difficult tasks. Female staffing will remain a priority this year. Training programme for lady health visitors should be established and I am glad I see here some of the LHVs and I commend them for the fine work they are doing.

G. EVALUATION

In all human enterprises, evaluation is needed and health is no exception to the matter. After 7 years of existence, it may be time to evaluate ourselves in order to refine goals and objectives, change gears and improve our services-who should do what, to whom, with what kind of resources and with what relation to other health services.

In evaluating our own work we should address four type of questions:

i) Can it work? This type of evaluation is concern with efficacy.
ii) Did it work? This question addresses both the efficacy of service and its acceptance by those to whom it is offered. It tests the effectiveness or usefulness.
iii) Is it reaching those who need it? Is the service accessible to all people who could benefit from it? The evaluation of this type is concerned with availability.
iv) Finally is it worth doing (compared with other things we could do with the same resources? Is it cost effective? This is the evaluation of efficiency.

Evaluation should be taken at all levels, voluntary agencies as well as individuals. It is the only way to see where we are going.

Dear colleagues, dear friends, in conclusion I want to thank you for being here, to exchange views, find solution to problems. I want to thank you for your support, your collaboration and assure you that our effort will not remain in vain and will be remembred by the Afghan refugee community.

Thank you for your attention.

INFANTILE DIARRHOEA: DIAGNOSIS AND MANAGEMENT

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Infantile Diarrhoea is the commonest cause of death in under one year age group in Pakistan. This is confirmed through hospital data from various institutions including JPMC, Karachi. This condition is particularly serious and results in fidelity in children who are moderate to malnourished. As more than 50% of our children have poor nutritional status the combination of malnutrition and diarrhoea proves lethal. Usually diarrhoea in well nourished children is to treat and results are not so disasterous.

DEFINITION

Diarrhoea may be defined as a change in the usual stool pattern. In this regard both consistency and the number of stool is important. Usually there is increase in the number of stools which become more loose than normal. However one should remember that breast fed babies have less frequent stools normally. This should not be labeled as diarrhoea and does not need any treatment.

CAUSATIVE FACTORS

Because of poor infantile and person hygiene and unsatisfactory feeding practices in the young children, infantile diarrhoea is a very common illness. Breast fed babies do not get diarrhoea except when they are being given supplementary bottle feeding or other foods in unheygenic manner. Breast milk prevents babies from diarrhoea as it is clean and contains various uneffective factors including IGA. In summary following are some of the causative factors contributing to increasing infantile diarrhoea:—

1. Breast feeding failure.
2. Bottle feeding.
3. Unhygenic supplementary feeding practices.
4. Malnutrition etc.
5. Others.

ETIOLOGICAL AGENTS

About 10 years ago ¾th of the stool samples sent to a laboratory from children with diarrhoea were reported as negative. Today the same proportion is reported as positive for various pathogenic agents. Following are the Etiological agents which have been isolated from the stools samples of children in the developing countries:

ACKNOWLEDGEMENT

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1. Viruses *i e* Rota Virus
2. E. Coli
   a) Enterotoxigenic (ETEC)
   b) Enteroinvasive (EIEC)
   c) Enteropathogenic (EPEC)
3. V. Cholera
4. Shigellae
5. Salmonellae (Non-typhoid)
6. Compylobactor Jejuni
7. Yersinia Enterocolitica
8. Protozoal infections:
   a) E. Histolytica
   b) Giardia Lamblia
9. Parenteral infections:
   a) Respiratory tract infections (including otitus media)
   b) Urinary tract infections
   c) Malaria

CLINICAL FEATURES

Infantile diarrhoea leads to loss of electrolyte and water from the body. Unless there is adequate replacement of the above mentioned factors it leads to:

a) Dehydration (fluid and electrolyte malnutrition)
b) Malnutrition (protein energy)

2¾ of the deaths in diarrhoea in young children are caused by dehydration.

CLINICAL ASSESSMENT

The following plan may prove useful in clinical assessment of acute diarrhoea.

a) **History**

In cases of infantile diarrhoea, history from the mother is perhaps the single most rewarding element in the assessment of a child's condition. Try to gather the following information:

i) Duration – of illness
ii) Stools – quantity, frequency and consistency.
iii) Vomiting – duration and frequency.
iv) Urine – when passed last, colour and quantity.
v) Food intake – amount of food and type of food.

b) **Physical Examination**

Make a quick general examination to decide if the child is in urgent need of treatment. If so, start the treatment first (ORT or IV) and detailed examination may be made later. Special note should be taken of the following:

i) Fever-always take rectal temperature in young children. A child with diarrhoea may have high temperature.
ii) Breathing – Child may have rapid breathing for two reasons – pneumonia or metabolic acidiosis, associated with dehydration.
iii) Shock – of hypovolaemic type may occur in severe dehydration. It manifests as cold sweaty extremities, rapid feeble pulse, poor or unrecordable blood pressure and peripheral cyanosis.
iv) Malnutrition – in patient with severe malnutrition it may not be easy to assess the degree of dehydration with conventional signs *e.g.*, loose skin, sunken eyes and fontanallae. History of frequent loose motions and thirsty child are more reliable indicators.

c) **Weighting the patient:**

i) If we know the previous weight of the child it is easy to determine the degree of dehydration according to the weight loss *i.e* :
Weight loss upto 5% .... mild
Weight loss upto 5 – 9% .... moderate
Weight loss upto 10% or more .... severe
ii) Weighting at intervals during therapy is helpful in assessing the progress of rehydration.

Shock occurs when the deficit equals about 10% loss of body weight, greater losses may cause death. It is important to note that half of this lethal deficit can develop before the usually recognised signs of dehydration appears.

In the overall assessment of the patient generally the greater the stools and vomitus losses, the more dehydrate the infant. There is no cut and dry formula for the detection of dehydration and the best tool in assessing dehydration is keen observation based upon experience. (See table below)

d) **Additional signs and symptoms**

When you are looking for the signs of dehydration, look at the other important signs which may need special treatment:

i) Blood in the stool.
ii) Fever.
iii) Enlarged spleen.
iv) Convulsions and loss of consciousness.
v) Breathing difficulty – Rapid and deep respiration.
vi) Marasmus and Kwashiorkor.

Obviously the presence of any one or more of the above factors should alert the physicians regarding their significance and the need for appropriate actions.

MANAGEMENT OF ACUTE DIARRHOEA

After having made the assessment of patient's state of hydration following are the essential principles in the management:

ASSESSMENT OF DEHYDRATION

Signs and Symptoms	Mild Dehydration	Moderate Dehydration	Severe Dehydration
General appearance condition of infants and young children.	Thirsty, alert, restless.	Thirsty, restless, or lethargic but irritable when touched	Drowsy, limp, cold sweaty, cyanotic, extremities, may be comatose.
Radial pulse.	Normal rate volume	Rapid and weak	Rapid, feeble, sometimes impalpable.
Respiration.	Normal	Deep, may be rapid	Deep and rapid
Anterior Fontanella.	Normal	Sunken	Very sunken
Eyes.	Normal	Sunken	Deeply sunken
Tears.	Present	Absent	Absent
Mucous membranes.	Moist	Dry	Very dry
Urine flow.	Normal	Reduced amount dark	None passed for several hours, empty bladder.

To assess fluid deficit in various degrees of dehydration see the following table:

DEHYDRATION AND FLUID DEFICIT

Signs and Symptoms	Mild Dehydration	Moderate Dehydration	Severe Dehydration
Body weight loss	0 – 5%	6 – 9%	10% or more.
Estimated fluid deficit	40 – 50 ml per kg.	60 – 90 ml per kg.	100 – 110 ml per kg.

1. Fluid therapy, to counter the state of dehydration, and on going/normal losses.
2. Maintenance of nutrition.

Fluid Therapy

The important thing to realise is that the loss of water and electrolytes from the body is taking place in the shape of stools, vomitus, sweat, urine and insensible losses from the skin and breathing. This loss has to be matched by the input of water and electrolyte.

Till recently fluid replacement in a child with dehydration at a health facility, was carried out by intravenous therapy. Now we know that cases of mild, moderate, and rarely even severe dehydration can be managed with ORT. Of course the crucial point is to start the therapy early.

Early replacement therapy: should begin promptly after diarrhoea starts, as it has following advantages:

1. It avoid risk of death from severe dehydration.
2. It minimizes the symptoms associated with increasing water and leectrolyte deficit *e.g.*, vomiting, anorexia, lethargy or coma, which interferes with feeding.
3. The treatment needed is simpler, because it is given while two important homestatic mechanism – Thirst – Renal function are still intact. When ORT is in progress, thirst is one important guide to the amount of ORS required: Normal renal function permits the retention of any excess of water and salt.

Rationale of Oral Rehydration Therapy

For dehydration caused by diarrhoea, fluid therapy is the first and the only effective treatment. It consists of administering either intravenous or orally a solution in water of salts comprising essential electrolyte *i.e.*, ions of sodium, potassium, choloride and bicarbonate. Thus both water and electrolyte being lost in diarrhoeal stool are replaced. Fluid therapy does not present or cure infection that cause diarrhoea but it counteracts the dehydration that is usual cause of death in acute diarrhoea.

Intravenous therapy is effective but expensive, difficult to administer and possible only in health facility situations. Oral rehydration therapy offers the potential not of treating dehydrated patients in a health facility but also as a home based treatment even in villages throughout the world.

Oral administration of salt solution alone or in combination of Glucose or Sugar has been tried in Europe and North America from 1930's. In the 1960's it was realized that glucose had a more important and essential role in the oral therapy. Diarrhoeal disease interferes with sodium transport acrosses the intestinal wall but glucose transport is not markedly decreased and glucose carries sodium and water with it.

The most dramatic demonstration of the practical effectiveness of ORT camp under the adverse conditions of a cholera epidemic in West Bengal refugees camps during 1971. Established treatment centres for intravenous therapy had 4 times more mortality than the camps which were using ORT Ad. Lib.

WHO COMPLETE FORMULA

Out of the above mentioned experiments and experience came the WHO complete formula for Oral Rehydration. The constituents of the formula are:

Sodium Caloride	3.5 gm.
Sodaium Bicarbonate	2.5 gm.
Pottassium Chloride	1.5 gm.
Glucose	20 gm.
Water	1.0 ltr.

This formula is regarded by majority of the people as physiologically the most appropriate single formulation for world wide use. Although some paediatricians have argued that it contains too much sodium for infants, public health practitioners point out that continued breast feeding and drinking other fluids in addition to Oral Rehydration solution minimizes this risk.

The Scientific Basis

For the optimum absorption of orally administered electrolytes and water it has been demonstrated that certain physiological criteria have to met:

a) The solution should be approximately isotonic with plasma (including the osmolarity contributed by glucose).

b) Simple salt and water (electrolyte solution), when administered by mouth, is not absorbed in sufficient quantities to counteract dehydration. The addition glucose to the above solution enhances the absorption of sodium and water enormously. This point was well put by the Lancet:
"The discovery that sodium transport and glucose transport are coupled in the small intestine so that glucose accelerates absorption of solute and water was potentially the most important medical advance this century," (Lancet, 1978, ii, 300)

c) The concentration of the carrier (glucose) should be 20-30 g/L in order to achieve maximum sodium and water absoption. A higher concentration can include osmotic diarrhoea and lower concentration can result in suboptimal absorption of electrolytes and water.

d) The higher sodium concentration in the solution is to its concentration in plasma, the higher is its net absorption. A sodium concentration of 90m mol/L in the solution induces an optimum ratio of sodium to water absorption for correcting the sodium and water deficit in diarrhoeal dehydration.

e) Potassium losses from severe diarrhoea can be particularly harmful in infants, especially those who are undernourished. Potassium absorption takes place passively depending upon concentration gradient *i.e.*, a potassium gradient higher than that in plasma will induce absorption. A potassium concentration in oral rehydration solution of 20 m mol/L will be tolerated and adequate for replacement therapy.

f) Bicarbonate, which is needed to correct acidoses, is actively absorbed independently of glucose. Base deficit acidosis produced by diarrhoea of any cause and in any age group can be corrected using oral fluids with bicarbonate concentration of 30-40m mol/L.

Some of the points are highlighted regarding use of ORS.

1. **TOO MUCH SODIUM**

Some paediatricians have been concerned about the sodium concentration (90m mol/L) in the complete formula of ORS and its use in infants. However the generally recognised advantage of this concentration is that is suitable for the treatment of older children and adults in whom diarrhoea (cholera and ETEC) is often secondary with stool sodium concentration upto 130m mol/L as well as infants and children with non-cholera diarrhoea when stool sodium concentrations are usually lower but whose accumulated electrolyte losses are treated by a solution having a sodium concentration of 90m mol/L.

2. **SHOULD WATER BE BOILED**

It is only logical that boiled and cooled water is better for preparation of ORS. Such facilities in an area where diarrhoea is common are unlikely to available. Gambia study indicated that whether water used to mix ORS was clean or contaminated made no difference to the incidence or duration of diarrhoea.

Because of overriding need to administer water and electrolyte quickly to a sick child, diarrhoea control programmes generally recommend the use of clean water which is immediately available. Mothers must appreciate that OR solution is not to be boiled after it is mixed. Even with clean boiled water OR solution is a good medium for bacterial growth. Bacteria multiply rapidly within the 24 hour period. We recommend that the solution once prepared must be used within twenty four hours or preferable within 12 hours. After this period the left over OR solution should be discarded and fresh one prepared.

3. **IMPORTANT ADVICE FOR THE MOTHERS REGARDING ORAL REHYDRATION THERAPY**

i) Do not make ORS solution in any liquid except water.
ii) Do not boil, after dissolving ORS powder in water.
iii) Do not add extra sugar, glucose or any other sweetener to this solution to make it more palatable.
iv) Do not make ORS solution in milk.
v) Do not add more ORS to the water in the recommended quantity.

Thirst is a useful guide to the amount of OR solution required. Rehydration is often achieved by allowing the patient to drink as much fluid as desired but patients with very rapid stool losses may hve to be encouraged to drink sufficient fluid.

GUIDE LINES FOR REHYDRATION THERAPY

When considering the fluid therapy in young patients with acute diarrhoea it is convenient to plan on the following lines:

1. Deficit or rehydration therapy-correction of existing water and electrolyte deficit as estimated during the assessment of dehydration.

2. Maintenance therapy-replacement of on-going abnormal losses of water and electrolyte.
3. Normal daily fluid requirement needs to be provided as well during rehydration and maintenance therapy.

Rehydration and maintenance therapy can both be accomplished through ORS except in cases with severe dehydration, uncontrolable vomiting or other complications where IV therapy is necessary.

On the other hand, normal daily fluids requirement must be satisfied with fluid of low salt concentration *e.g.*, plain water, breast milk, diluted milk feeds etc.

This is particularly important in infants. Due to their large surface area per kg of the body weight and high metabolic rate under normal conditions, they require two and half times more water per Kg than adults.

DEFICIT THERAPY:

The deficit of electrolyte and water incurred must be replaced adequately and promptly.

Table indicates the estimated amount of appropriate fluid needed. Generally, in a case of severe dehydration (10% loss of weight) in a young child approximate deficit is taken as 100 ml per Kg of body weight.

ORT is generally adequate method of correction of deficit in mild, moderate and early cases of severe dehydration. Patients with severe dehydration with or without hypovolaemic shock may need I.V. therapy to achieve complete or near complete rehydration.

While rehydration therapy to replace the deficit is in progress, the patient's normal daily fluid requirement must also be kept in mind.

(a) Breast fed infants-after the first 4 hours of ORT on earlier if rehydration is complete, breast feeding should be started and continued as often as the infant desires, besides the ORT.
(b) Non-breast fed infant-after the 4 hours ORT or earlier if rehydration is complete, a volume of plain water should be given equal to half the volume of ORS solution taken by the infant. This plain water should be given over the next one to two hours before continuing ORS solution.

It is important to keep such a child under constant review, (may be every hour) to assess both its state of hydration as well as any other associated conditions. Particular attention may be paid to the following:

(a) Stool-number and volume.
(b) Vomiting-how many times and how much.
(c) Dehydration-any changes in the signs.
(d) Rehydration fluid oral or I.V. amount given so far should be kept.

GUIDELINES FOR REHYDRATION (DEFICIT) THERAPY

Degree of Dehydration	Age Group	Type of Fluid	Volume of fluid (per kg) Body Wt.	Time of Administration
Mild	All	ORS Solution	50ml/Kg	Within 4 hours
Moderate	All	ORS Solution	100mg/Kg	Within 4 hours.
Severe		I.V. Ringer's Lactate	30ml/Kg	Within 1 hour.
		Followed by		
	Infants	I.V. Ringer's Lactate	40ml/Kg	Within next 2 hours.
	Older Children & Adults	I.V. Ringer's Lactate	110ml/Kg	Within 4 hours. Initially as fast as possible until radial pulse is palpable.

MAINTENANCE THERAPY

Once the deficit has been corrected and the signs of dehydration disappear, (hopefully within the first few hours) we have to compensate for the abnormal on going losses *e.g.*, loose stools vomiting etc. This is called "maintenance therapy". Naturally, besides the replacement of abnormal losses, body's normal daily fluid requirements have also got to be fulfilled. The later can be accomplished through.

1. In breast-fed infants – continue breast feeding as often as necessary besides ORT.
2. In non breast-fed infants – ½ strength milk drinks should be offered until the diarrhoea stops.
3. Other drinks – (plain water, tea, sharbat, lassi, rice water, egg water, drinks etc.), which the child is used to, may be given.

ORS, which is continued, forms about 2/3rd while all the milk and other fluids about 1/3rd of the total fluids taken until the diarrhoea stops.

During the maintenance therapy if signs of dehydration reappear, and/or even increased amounts of ORS cannot achieve rehydration I.V. therapy should be considered. Patients with severe diarrhoea need to continue maintenance therapy under supervision (hospital or clinic) while those with mild diarrhoea can accomplish maintenance therapy at home. Maintenance therapy is continued until diarrhoea stops.

GUIDELINES FOR MAINTENANCE THERAPY

Amount of Diarrhoea	Kind of Fluid	Administration	Amount of Fluid
Mild Diarrhoea			
(Not more than one stool every 2 hours or longer or less than 5ml per kg per hour)	ORS	By mouth at home	100ml/kg body weight per day until diarrhoea stops.
Severe Diarrhoea			
(More than one stool every 2 hours or more than 5 ml of stool per kg per hour).	ORS	By mouth at treatment facility	Replace stool losses volume for volume, if not measurable give 10-15 ml/kg body weight per hour.

TREATMENT OF MILD DIARRHOEA

HOME MADE REMEDIES

Quite a substantial number of children have mild diarrhoea *e.g.* they have no signs of dehydration. They may not need rehydration therapy but must get advice about prevention of dehydration. Such children should be given extra fluid, (Household food solutions) which they are normally used to *e.g.*, water, weak tea, juice, soup, lassies, barley or rice water, white of the egg or home made salt and sugar solution.

a) **HOUSE HOLD FOOD SOLUTION.**

- RICE WATER
- EGG WATER
- PODINA WATER
- KAHWA
- TEA
- LASSI

b) **SUGAR AND SALT SOLUTION**

- PINCH AND SCOOP METHOD
- DOUBLE ENDED SPOON METHOD
- OTHERS

ISSUES

a) EFFECTIVENESS
b) SAFETY
c) AVAILABILITY
d) COST
e) PREPARING AND MIXING

SUPER O.R.S.

It is evident that optimizing ORS can both improve rehydration and can make diarrhoea shorter and less severe, which can possible be accomplished with use of easily available foods in ORS, at a lower cost. This has led to the discovery of the "Super ORS" in which rise is used in place of glucose in WHO recommended ORS. Different foods are being tried, and a series of in vivo animal and studies are in progress in different countries, to define th optimum composition of "SUPER ORS" and preparing each country's recipe for "Super ORT" with practical household mixtures. The composition of "Super ORS" or rice ORS is as follows:—

a) Nacl .... 3.5 grams
Na·Bicorb .... 2.5 grams
KCl .... 1.5 grams

Cooked Rice powder 30 grams and 1 litre of water (Reference 10)

b) Nacl .... 3.5 grams.
Na Bicorb .... 2.5 grams.
KCl .... 1.5 grams.

Popped Rice powder 50 grams and 1 litre of water (Reference 11).

MODIFICATION OF WHO COMPLETE FORMULA

In 1982-1983 the WHO Diarrhoeal Diseases Control (CDD) Programme supported laboratory studies to identify a more stable ORS composition, particularly for use in tropical countries, where ORS has to be packed and stored under climatic conditions of high humidity and temperature. The results of these studies demonstrated that ORS containing 2.9 grams of trisodium citrate dehydrate in place of 2.5 grams of sodium bicarbonate (sodium hydrogen carbonate) was the best of the formulations evaluated. The formulae of the standard ORS (ORS-bicarbonate) and ORS containing trisodium citrate dehydrate (ORS-citrate are shown below):

ORS—BICARBONATE	GRAMS/ LITRE	ORS-CITRATE	GRAMS/ LITRE
Sodium Chloride	3.5	Sodium Chloride	3.5
Sodium bicarbonate (sodium hydrogen carbonate)	2.5	Trisodium citrate dihydrate	2.9
Potassium chloride	1.5	Potassium chloride	1.5
Glucose anhydrous	20.0	Glucose anhydrous	20.0

WELCOME ADDRESS

BRIGADIER SAID AZHAR
CHIEF COMMISSIONER FOR AFGHAN REFUGEES
GOVERNMENT OF PAKISTAN

BISMILLA-IRRAHMAN-IRRAHIM

Honourable Syed Qasim Shah,
Federal Minister for States & Frontier Regions,
Excellencies, Distinguished guests & Delegates,
Ladies & Gentlemen,

Assalamo Alaikum,

I feel greatly honoured to address this distinguished gathering at the 3rd Annual Seminar on Afghan Refugee Health Programme. I wish to express my gratitude to the Honourable Minister for States and Frontier Regions who is also the Minister in charge of Refugee Affairs for kindly consenting to be the Chief Guest on this occasion, despite his tremendous preoccupations. I would also like to extend a warm welcome to all the delegates who have taken the trouble of coming from far and wide to take part in the deliberations of this Seminar. My thanks are also due to the distinguished guests present here this morning to participate in this humanitarian exercise. Last but not the least, I must congratulate the organisers of the Seminar for making all the elaborate arrangements.

As you are no doubt aware, the refugee problem has continued to grow unabated and only in the past three or four weeks the number of new arrivals has exceeded 30,000. In this humanitarian undertaking the government of Pakistan has been continuously assisted by the international fraternity and the UN organisations as well as NGO's and Private Voluntary Organisations. While the government remains deeply committed to a political solution of the problem, the Humanitarian Assistance Programme must go on.

Apart from the mundane needs of the Refugees regarding food and shelter, we have been paying particular attention to their health and sanitation. While during the initial stages of the Refugee Influx the Health Programme centred around curative facilities and nutrition, we have now shifted the emphasis to the preventive and promotive aspects of the health care. Thus, apart from providing more than 250 Basic Health Units, we now cater for a large number of big and small general and specialized hospitals in NWFP, Baluchistan and Mianwali District of the Punjab, providing radical treatment, surgical intervention and diagnostic investigations. Special emphasis has been laid on TB and Malaria control, Mother and Child Care, Expanded Programme of Immunization, and Personal Hygienic and Sanitation.

As a result of these efforts, the health indicators provided by a survey carried out by Centers for Disease Control (CDC-USA) have been highly encouraging. The infant mortality rate has decreased by 50% in 1986, malnutrition amongst children and infants has likewise registered a substantial decrease, again by about 50%. Hospital bed strength has gone up by about 20%. The

It appears from the studies mentioned above that, in comparison with ORS-bicarbonate, ORS-citrate corrects acidosis at an equal rate and its use results in less stool output, especially in high-output diarrhoea (*e.g.*, cholera). The later observation is most probably due to a direct effect of trisodium citrate in increasing intestinal absorption of sodium and water.

DIETARY MANAGEMENT IN DIARRHOEA

Traditionally in our country, (and with some superficial justification), food is withheld from a patient with diarrhoea. This practice may not do a lasting damage to the adults but is certainly most harmful in young children. We know that diarrhoea is five times as common in malnourished children as compared to those with normal nutritional status. If starvation therapy is practised in such cases they get further malnourished and naturally are more prone to subsequent episodes of diarrhoea. This vicious circle is dangerous.

The following feeding advice should be followed, in case of acute infantile diarrhoea:

a) OR solution for the 1st three to four hours.
b) Once rehydration is adequate, start breast feeding on ½ strength formula milk besides other fluids.
c) If the above is tolerated well and there is no vomiting, soft easily digested foods may be continued inspite of ongoing diarrhoea, *i.e.* soft mashed banana in milk, yogurt, mashed boiled rice or potatoes in soup etc.'
d) It is better to have child who is being fed as suggested above and passing a few extra stools, rather than the one who is being starved and passes less number of stools.

It will be useful if the following points are impressed upon the mother about feeding a child with diarrhoea.

1. **Small portions**: fed the child with small portions throughout the day. Do not force him to have too much food at a time. Let the child have his favourite food and gradually get back to his routine diet.

2. **Which foods**: energy rich foods are most useful-banana, potatoes, yogurt and cereals cooked with milk, sugar and a little fat on oil. Foods containing potassium (pineapple, citrus fruits, bananas etc.) should also be given.

3. **Extra meal**: breast milk or ½ strength milk is started as soon as the child is rehydrated. Once the diarrhoea stops, an extra meal should be given each day, may be for one to two months. It will help to compensate for the deficiency of calories incurred during the episode of diarrhoea.

4. **Remember to advise**:

- Prepare all foods in a clean place, using clean pans and utensils.
- Food prepared should be eaten soon after it is cooked. If not, it should be throughly heated again before eating.

- Wash uncooked foods in clean water before eating.
- Ensure that the young child is getting enough food and try to give him in a separate plate or dish.
- Weight him once a week in the beginning and once a month later to see if he is gaining weight.

ROLE OF DRUGS IN INFANTILE DIARRHOEA

During the days when "acute undifferentiated diarrhoeas" used to account for 80% of such cases with no positive organism in the stool examination, various chemotherapeutic agents were used as treatment. Now that we know in most countries a large majority of cases of diarrhoea in young children are due to Rota-virus and E. Coli etc., the role of antimicrobials has become very limited. The above mentioned organisms do not respond at any antibiotics and the main treatment is rehydration therapy.

Specific indications for the use of antimicrobials including antibiotics for the routine treatment of acute diarrhoea are:

1. Cholera.
2. Severe Shigella dysentery.
3. Amoebic dysentery.
4. Acute Giardiasis (See table shown below)

Causes	Drug(s) of Choice Alternative	
Cholera	Tetracycline Children	50mg/kg/day in 4 divided doses x 3 days.
	Furazolidone Children	5mg/kg/day in 4 divided doses x 3 days.
	Erythromycin Children	30mg/kg/day in 3 divided doses x 3 days.
Shigella Dysentery	Amipicillin Children	100mg/kg/day in 4 divided doses x 5 days
	Trimethoprime (TMP) Children	10mg/kg/day in 2 divided doses x 5 days.
	Sulfamethaozole (SMX)	50mg/kg/day in 2 divided doses x 5 days.
Acute Intestinal Amoebiasis	Metronidazole Children	30mg/kg/day x 5 – 10 days.
	In very severe cases Dehydrometine hydrochloride by deep intra muscular injection, 1 – 1.5 mg.kg/ (maximum 90 mg) for up to 5 days depending on respond (all ages).	
Acute Giardiasis	Metronidazole Children	15 mg/kg/day x 5 days.
	Quinacrine	

Two main groups of drugs are commonly used in treatment of diarrhoeal diseases.

1. Antimicrobials: which are capable of killing causative organisms and improving the condition.
2. Antidiarrhoeal drugs: which diminish the amount of fluid loss by various pharmaceutical mechanisms.

These two types of drugs are often combined and many preparations are marked containing both antibiotics and antidiarrhoeal drugs. Such combined drugs should not be used. Only single ingredient drugs should be given and only where appropriate.

Antibiotics

In most cases of acute watery diarrhoea in young children (Rota-virus, E. Coli, non typhoid salmonella) antibiotics are not of proven value. Some cases of salmonellae septicaemia, which may present in childhood will require antibiotics. In cholera and shigella dysentery antibiotics are indicated. In cholera, tetracycline or alternatively furazolidone and chloramphenicol have been shown to shorten the duration of the disease. Severe cases of compylobactor may be treated with erythrocin for a total of five days. In mild shigella infection no drugs are necessary but in bacillary dysentery with fever specially in infants, ampicillin or cotrimaxozole is the drug of choice.

Neomycin not only causes renal damage but also makes diarrhoea, dehydration and nutritional losses worst. It reduces intestinal absorption and causes diarrhoea in healthy individuals.

Antibiotics in intestinal infection of unknown cause

In current set-up most of the time it is not possible to detect the nature of the causative organism. Sometimes the laboratory report may be received when the child may have already recovered. Of course, antibiotics are not of value in a large group of viral diarrhoeas. But sometimes a suggestion has been made that antibiotics should be routinely prescribed in case the illness turns out to be due to an infection for which antibiotic treatment is indicated. This is not justified because.

(a) Administration of antibiotics gives a false sense security to the physicians as well as to the mothers and/or nurse. Thus attention is diverted from the essential task rehydration replacing water and electrolyte.
(b) The policy of indiscriminate use of antibiotics promotes the development of resistant strains, later on giving rise to severe illness.
(c) Antibiotics are expensive.

ANTIDIARRHOEAL DRUGS

(a) Absorbents: Kaoline, Pectin, Activated charcoal, Bismuth carb.

Most popular drugs are kaolin and pectin, although in the clinical trials their efficacy has not been proven. Luckily, as compared to the other so çalled anti-diarrhoeals, these drugs are harm-

less. Sometimes we use these in the form of a "mixture" as a placebo to satisfy a mother's demand for a medicine.

(b) Antimotility Drugs

Opiates, Diphenoxylate and loperamide act through reduction of the bowl motility. Although popular with both the physicians and the mothers, such drug should never be used in children. By slowing the peristalis (Paralysing the gut) they make the situation worse. These drugs depress respiration and/are an important cause of accidental over-dose in children. This is especially true in 0-6 months age group.

(c) Stimulants.

Shock in a child with diarrhoea is due to hypovolaemia, so drugs like adrenaline, coramine etc., are not indicated.

(d) Purgatives are a popular form of treatment of diarrhoea, in some of our communities, as cleaning up ritual.

(e) Steroids have no role in the treatment of diarrhoea. Some people use a state does in case of severe shock.

ANTI SECRETORY DRUGS.

Some drugs which reduce the abnormal loss of fluid from the small intestinal mucosa are being investigated in childhood diarrhoea. Aspirin, indomethacin and nicotinic acid may decrease the action of cholera and other toxins on the intestinal mucosa. Chlorpromazine probably inhibits adenylcyclase. Hence reduction in fluid losses in diarrhoea. It may cause drowsiness in children and hence reduction in fluid intake. None of the drugs mentioned are as yet of proven value for routine use in the management of diarrhoea.

PREVENTION OF DIARRHOEA

It will be highly rewarding if the physician can arrange to impart the following lesson to the mother for prevention of diarrhoea. Breast feed your baby for 1-2 years, start cleanly prepared weaning foods from 4 – 6 months and do not bottle feed. More over,

1. If a child gets diarrhoea give him as much fluid as he will drink. The ideal fluid is "ORS complete formula". If it is not available, "home made" solution may do. In early stages use any fluid in the house *i e* water, weak tea, rice water, barley water, egg water, juices, lassi, etc.
2. Do not stop feeding a child with diarrhoea. Starvation therapy is dangerous. The child will become further malnourished. Continue breast feeding or ½ strength milk with soft easily digestible foods *i.e.* mashed banana in milk, yogurt, soft boiled rice in soup, etc.
3. Mother should attend the health centre for immunization and nutrition education besides weighting the child regularly.
4. Mother should be educated in hygienic practices in child care particularly feeding.

PICTORIAL HIGHLIGHTS OF SEMINAR



Dr. Jan Kaleta



Professor Mushtaq A. Khan



Dr. Virginia M. Mermel

5. Try to find out from the mother her "beliefs and practices" regarding diarrhoea. Discourage her from the harmful ones and encourage her to continue helpful practices.

A physician is well advised to train his own staff in the principles of prevention of diarrhoea. They inturn should teach the Mother sympathetically. The one single most useful measure in the prevention of diarrhoea is the ability to encourage and estbalish successful breast feeding.

Appropriate "weaning" from the age of 4 – 6 months will help a young child to enjoy a good nutritional status and get less diarrhoea. Weaning does not mean stopping the breast milk but adding soft solid foods to the diet in addition.

PREVENTION OF DIARRHOEA IN THE COMMUNITY

1. Environmental sanitation.
2. Proper excreta disposal.
3. Control of flies.
4. Clean water supply.
5. Personal & domestic cleanliness.
6. Measles immunization.

TUBERCULOSIS CONTROL AMONG AFGHAN REFUGEES IN BALUCHISTAN

DR. JAN KALETA
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The aim of any tuberculosis control programme is to reduce to the extend possible morbidity and mortality from tuberculosis and to alleviate sufferings of tuberculosis patients. This can be achieved by proper implementation of tuberculosis control measures currently available, *i.e.*, case finding, treatment and prevention. Tools for fighting tuberculosis are only a few, but highly effective. These are TB drugs and BCG vaccine. Their proper implementation on a country-wide scale will give optimum results.

Case finding is usually being carried out in developing countries as "passive case-finding" by sputum examination of coughing patients reporting themselves to basic health services. Case finding can be supported by "active" measures, such as house-to-house search for coughing patients and examination of their sputa or by chest X-Ray examination of "risk groups" among the population.

Treatment is being applied primarily to bacillary tuberculosis patients, the genuine spreadors of infection. The currently available TB drugs (these are mainly six: Izoniazid, Rifampicine, Streptomycine, Pyrazinamide, Ethambutol and Thiocetazon) are very potent and capable of rendering all bacillary patients within 1 or 2 months non-infections. However, duration of treatment must be continued for 6, 8 upto 12 months depending on drug combination and treatment regimen. The "standard" regimen, applied in our programme consisting of streptomycin for 2 months and Isomiazid plus Thioacetazon for 12 months is the longest one, but the cheapest, applicable in countries with limited resources. One year treatment amounts to about Rs. 150.00 or Rs. 12/- per month. The most potent regimens containing four drugs in the initial 2-months "attack phase" (Isoniazid, Rifampicine, Streptomycine and Pyrazinamide), followed by 4-months of Isomiazide and Rifampicine (or Etambutol) are of 6 month duration only, but 6-7 times more expensive (6 month regimen costs about Rs. 1,080.00). Regularity of drug intake is of paramount importance and retrieving of treatment defaulters must be well organized. Treatment should be followed-up by periodic sputum examination, rather than by chest X-rays.

BCG vaccination is a preventive measure applied in children in order to protect them against virulent TB infection. Though still much disputed, this measure is recommended by the Expert Committee on Tuberculosis of the WHO to be applied in high prevalence countries in the early childhood. The most dreadful and fatal forms of tuberculosis, *i.e.* TB meninegitis and acute miliary tuberculosis have not been seen in BCG vaccinated children.

Besides the above measures, a TB control programme must include a programme document, giving policy direction and technical outlines for an organized approach to tuberculosis control. Such document was prepared by WHO and adopted by Government and voluntary agencies alike in early 1984. Securing financial resources for carrying out TB activities is essential. Introduction of a uniform recording and reporting system enables follow-up and evaluation. Training of health personnel involved in TB activities before starting the programme is an essential precondi-

tion and should be followed by periodical re-training. Continuous supervision of health units is a motivating factor for health personnel and should be combined with teaching field staff on the spot how to rectify drawbacks. (Training-oriented supervision). Health Education and community participation in activities such as immunization, ambulatory (domiciallary) treatment, participation in active case finding activities is an important precondition for a successful programme outcome. All the above measures and activities are entirely integrated into the routine work of basic health services in order to achieve a full impact. Consequently, there are a number of activities around the essential programme measures mentioned above, that make an entity of a Tuberculosis Control Programme.

In Baluchistan, the TB control programme, after initial preparations such as training of personnel, establishment of field laboratories, distribution of supplies etc., has been started early in 1985. (*i.e.,* one year later than in the NWFP). In its initial phase, the programme was facing a number of difficulties emanating from the traditionally weak infrastructure, paucity of health personnel, particularly female health personnel, lack of supervision, lack of working discipline and weakness in management, resulting in poor performance in 1985, mentioned in my assignment report WHO-EM/TB/165 November 1985. However, findings in 1986, based on my visits to 41 BHUs and SHUs indicate a considerable progress in strengthening working discipline and in expanding and qualitatively improving tuberculosis activities in the province.

Case finding activities by sputum examination of coughing patients increased at least three folds as compared with 1985. In the average 3-4 sputum smears are being prepared daily per one unit. Ten field laboratories, each serving about 3-4 units, and staffed with 1 or 2 trained microscopists, examine daily about 15 sputa and 20 malaria blood smears. During January to September 1986 a total of 1076 new TB cases were detected of whom 195 were AFB positive (one out of five). This is, however, only one third of the expected number of new AFB-positive cases occuring in the Afghan population yearly. The low positivity rate can be partly attributed to the still unsatisfactory reading and diagnostic ability of microscopists, who register mostly the heavy and moderate AFB positive findings, while scanty positive findings are seldom recorded, though such sputa make a considerable proportion of positive findings. The newly introduced outreach workers collected 50% of the sputa during their home visits to patients' families as well as from other coughing persons. Case finding is also supported by one mobile X-ray unit, which is regularly touring the camps and screening family contacts of TB patients, other coughing persons and treated TB cases.

Treatment of TB patients has improved in 1986 beyond expectation. All sputum positive cases are receiving the most potent drug combination in a short-course regimen of 8 months duration. X-ray positive but smear negative symptomatic patients receive standard treatment of 6 months. Sputum conversion is achieved in almost all cases after 1 or 2 months treatment. Regularity of drug collection is being checked daily. Consequently, treatment defaulter rates have come down from 60% (1985) to only 2% (September 1986) in most of BHUs – a remarkable achievement having in mind that regularity of drug-intake presents still an unsolved world-wide problem. The most deserving for the above results are the outreach workers, who are regularly retrieving defaulters and bringing them back for treatment.

The absence of any training activity of health workers in 1986 in TB control overshades to some extend the positive achievements.

A BCG scar survey conducted in November 1986 among 1,957 children 5-10 years of age in 13 refugees schools revealed a rather satisfactory coverage of BCG of 86.9%. A limited tuberculin testing of 256 children of same age revealed 14.1% of infected children (having in duration of 10 mm or more to 2TU PPD RT23 + Tween 80). This limited survey provides, however, only a rough idea about the BCG coverage and infection rate, as no random sample method was applied and the number of examined children is also relatively low.

One of the most actual problem appears to be the lack of cooperation and coordination between the Government health services of Afghan Refugees and those administered by Voluntary Agencies. The voluntary agencies, except MSF, tend to follow their own policies and strategies, have their own drug supplies, internal records and reports, etc. The major public health programmes, *i.e.*, tuberculosis control, malaria control, have not been included in the activities of voluntary agencies health units, thus depriving about 30% of the refugee population of the benefit of such programmes. Absence of reporting leaves the Project Director Health, Afghan Refugees in the dark about their activities. Though a considerable number of TB patients are being treated in voluntary agencies' BHUs, this treatment is neither supervised nor followed-up. Moreover, diagnosis of lung tuberculosis is often made on the basis of symptoms alone (without chest X-rays and/or sputum test) which is medically and ethically inadmissible. Interpretation of chest X-rays (if available) is often incorrect. Hence, such patients are being unnecessary subjected to TB treatment.

In conclusion I should like to offer some recommendations for the improvement of TB activities in 1987:

1. To bring activities of voluntary agencies' field health units in line with those run by Government/UNHCR. This means to introduce Tuberculosis Control, Malaria Control programmes according to the uniform methodology defined in the programme documents, introduce records and reports used in government units, forward regular reports to Project Director Health and accept technical supervision of field units by government health authorities concerned. This would entail training of all health personnel working in Voluntary Agencies' units.

2. To intensify training and retraining of health workers in TB control activities, and particularly training of microscopists in improving diagnostic ability of sputum smears.

3. To put into operation soonest possible the reference bacteriological laboratory for culture examination and drug sensitivity test at TB Sanitorium Quetta, for which WHO supplied a complete equipment.

4. To intensify supervision. For this purpose WHO might establish in Quetta a team lead by an experienced medical officer.

5. Among general recommendation it seems to me necessary to provide equal medical-care to th entire Afghan Refugees population and to eliminate those privileged served by a medical officer in a BHU and those under-privileged, permanently deprived of such service in the SHU. Posting medical officers from nearby BHUs twice weekly in SHUs would to some extend alleviate this problem. It is also necessary to post in each field laboratory two microscopists in view of the constantly increasing workload due to intensified case finding activities.

CLOSING ADDRESS

COLONEL ALTAF-UR-RAHMAN KHAN
DIRECTOR MEDICAL SERVICES FOR
AFGHAN REFUGEES IN PAKISTAN

Ladies & gentlemen

The Annual Seminar on the Afghan Refugee Health Programme, jointly sponsored by the Chief Commissionerate of Afghan Refugees (CCAR) and the United Nations High Commissioner for Refugees (UNHCR) was held in Rawalpindi on December 3 and 4.

In his inaugural address Chief Guest Syed Qasim Shah, Federal Minister for States and Frontier Regions, Kashmir Affairs and Northern Area, emphasized the Pakistan Government's determination to continue to discharge its humanitarian obligation to the Afghan refugees. He expressed satisfaction that a sound infrastructure for basic health care had been established and that the programme was moving ahead in specialized areas such as immunization of children, tuberculosis and malaria control, hygiene, sanitation, nutrition as well as increased hospital beds.

In his welcome address, UNHCR's Chief of Mission Mr. Kevin J. Lyonette praised the Pakistan Government's "unique" programme, including health for Afghan Refugees (AR) and reiterated that there was complete harmony between the Commissionerate for Afghan Refugees (CAR) and UNHCR on health programmes for the refugees as, indeed, on all aspects of the relief operation. Referring specifically to UNHCR's Afghan Refugee Health Programme (ARHP), Mr. Lyonette said that health could not be considered an isolated issue and, therefore, the ARHP was integrated either directly or indirectly in all UNHCR's projects.

He impressed on the participants of the seminar the importance of sanitation and of the supply of clean water to the AR villages specially to prevent diarrhoeal diseases which are a major health hazard for Afghan Refugee babies.

Referring to UNHCR's ongoing income-generating projects in the North-West Frontier Province and Baluchistan, Mr. Lyonette pointed out that although the main purpose of those projects was to provide the refugees employment and income, they also helped to improve the AR's health as the money they earned could get them better nutrition.

Mr. Lyonette next referred to UNHCR's road building projects in Baluchistan-access roads to isolated refugee villages-- and said that these roads would also help to improve the refugees' health as better communication and transport means that the ARs have access to better medical facilities and nutrition. Finally, Mr. Lyonette lauded the international community for the "humanitarian" approach to the Afghan refugee problem *vis-a-vis* health adding that about 50 agencies have offered help.

Brig. (Retd) Said Azhar, Chief Commissioner for Afghan Refugees spoke of the particular attention that is being given to the health and sanitation needs of the refugees. He recounted that during initial stages of the refugee influx the Health Programme centred around curative facilities

& nutrition, but the emphasis has now shifted to the preventive and promotive aspects of health care. Apart from providing more than 250 Basic Health Units, there is now a high number of large and small general and specialized hospitals in NWFP, Baluchistan and Mianwali District of the Punjab which provide radical treatment, surgical intervention & diagnostic investigations. Hospital bed strength has gone up by about 20% and the number of voluntary Agencies has also increased by about 60%.

Professional staff members from CCAR, UNHCR, the World Bank Programme, the Ministry of Health, Government of Pakistan and from private voluntary Agencies presented an overview of the ARHP. A special feature of this year's seminar was panel presentations on significant programmes of 1986: Primary Health Care and Health Education, Nutrition, Water Supply and Sanitation.

The Panel on Primary Health Care and Health Education stressed the interdependency of these two health care services. Examples of the integration of the concept and practices of Primary Health Care (PHC) with the already established activities of the Basic Health Unit (BHU) were presented. The speakers gave on in-depth description of the training of community members as community health workers as well as of the retraining of BHU staff for expanded roles in the community, thereby providing the audience with a realistic appraisal of the implementation of Primary Health Care.

From an environmental health standpoint, the seminar highlighted various factors which have either contributed to, or impinged upon the effective Environmental Health Services to the Afghan Refugees. The presentation covered educational approaches that have proved effective in promoting good sanitary practices among the refugee: technical considerations in water-systems development; and UNHCR's action plan for 1987/1988.

Nutrition is one of the main programmes for UNHCR's health strategies for 1986-1987. The nutrition thrust is focussed on strengthening the nutritional services and including them as an integral part of comprehensive Maternal Child Health Programme. In this context the role of the World Food Programme and the experience of voluntary Agencies in implementing supplementary feeding programmes were discussed by the panel members.

UNHCR's Senior Health Coordinator, Dr. Claude Aguillume said that health is one of the key elements for community development. The ARHP, said, has started to show "encouraging" results in the refugee camps: there is increasing participation in the programmes, no serious cases of malnutrition, better treatment for malaria and TB and also a slight decrease in the infant mortality rate.

Dr. Aguillaume listed suggestions for a new direction for the ARHP such as stress on preventive rather than curative medicine, renewed emphasis on health care for mothers and children and the need to emphasize health education at all levels in the AR villages and to involve community leaders in the development aspects of health.

Professor Mushtaq Khan, Pakistan Medical Science Institute described the management of childhood diarrhoea, major health problem among refugees. Dr. Jan Kaleta, Consultant, World Health Organisation, reported on his findings of an evaluation of the TB Control Programmes in Baluchistan.

number of Voluntary Agencies has also gone up by about 60%. Special programmes for TB and Malaria control have also been launched with considerable success. The vast majority of the children between ages 1 to 5 are now covered by the Expanded Programme for Immunization.

I believe our humble efforts in the field of Health Care as enumerated above, have benefitted the Afghan Refugees and the surrounding local population in all the Refugee Camps and there has not been a single case of death due to starvation or due to lack of medical and timely care. I must, therefore, congratulate all those concerned with providing the medical cover for maintaining such excellent standards and hope that their deliberations in the current Seminar will further improve the programme.

In the end I would once again like to extend my gratitude to the organisers of the Seminar, particularly Dr. Claude Aguillaume (UNHCR), Dr. Virginia Mermel, (UNHCR) & Col. Altafur Rahman Khan, DMS, CCAR, without whose persistent efforts the holding of the Seminar would not have been possible.

Although we have tried our best, we might have made some mistakes and in any case there is always room for improvement, so I will emphasise the importance of filling the proforma given for comments/suggestions.

Finally I have to thank all the participants, colleagues and the guests from Pakistan and abroad. I am also thankful to the Distinguished speakers like Professor Mushtaq Khan, Dr. Jan Kaleta and the guest speaker Professor Stephanie Simmonds. I am specially thankful to Dr. Virginia Mermel who along with her staff has worked hard for many many days, without her help this seminar could not have been held the way we have witnessed it. I hope that all our efforts during this seminar will bear fruit and we will be able to get maximum practical benefit from this seminar. Thanking you again & KHUDA HAFIZ.

THE CONTRIBUTION OF BASIC HEALTH UNITS TO PRIMARY HEALTH CARE

Dr. Alex Forro
Health Coordinator
United Nations High Commissioner for Refugees

Primary Health Care is a priority for the Afghan Refugee Health Programme in NWFP. However, the International Rescue Committee survey demonstrates that even with substantial support from Voluntary Agencies, Primary Health Care is difficult to implement. A majority of the Basic Health Units in NWFP do not have the support of Voluntary Agencies nor do they have Community Health Workers on their staff. Is Primary Health Care wishful thinking for these Basic Health Units?

If we keep in mind that Primary Health Care is mainly a communication system between health services and the community, each member of the Basic Health Unit has the potential to contribute to Primary Health Care. All staff members, whatever their roles, interact with refugees every day. The Basic Health Unit structure should then, to some extent, contribute to Primary Health Care.

For instance, what should be the role of the vaccinator at the Basic Health Unit and in the Community? Similarly, what should be the role of the physician with the staff and patients at the Basic Health Unit and what should be the role of physician in the Community? We can ask this question about evey member of the Basic Health Unit, but as time is limited, I prefer to focus on the Lady Health Visitor.

I do not wish to evaluate the potential of the Lady Health Visitor regarding Primary Health Care. I assume it is known by all of us. Instead, I want to present some of the problems regarding the involvement of the Lady Health Visitor in the Out Patient Department and hope that this approach will generate some answers in the ensuing discussion.

Initially the Lady Health Visitor was assigned to preventive activities in the Out Patient Department; however, these activities have gradually been replaced by curative ones. Out Patient Department consultations are often chaotic and exhausting: Women who are seeking help for their own health problems bring their children with them which contributes to the confusion. The majority of the patients who come to the Out Patient Department are seen by the Lady Health Visitor. The Medical Officer often sees patients for final diagnosis and treatment decisions, but these are patients who have been referred to him by the Lady Health Visitor after an initial assessment by her. For the Lady Health Visitor, this referral system means that she must evaluate every female patient. If we expect the Lady Health Visitor to perform preventive functions, then what should be her role in curative ones?

Contrary to popular beliefs, it is not always a problem for a male physician to work in the female Out Patient Department. Attitudes among refugees have changed; although big differences do exist depending on the tribe involved. Increasing the staff by introducing a female physician is out of the question. Such action would raise the level of care beyond that of the local Pakistani population and is not in keeping with Programme policies. Decisions to use the male physician for female patients must be made locally as conditions and attitudes vary greatly.

The second point is the question of teaching sessions at the Basic Health Unit. Many Lady Health Visitors find it more convenient to teach at the Basic Health Unit rather than in the community because of their limited working hours, transportation problems, and the extensive distances they must travel. These teaching sessions are often given after all consultations are finished and the women are asked to wait until the Lady Health Visitor is free to teach. As most of the women are present with their children or must return home to prepare food, only a small number are able to stay for the classes after they have received their medications. How can we improve these training sessions at the Basic Health Unit? How can we reach a greater number of women? The accomplishment of home visits for the Lady Health Visitor is difficult. Not only are the distance to be covered great, but the issue of security is of major concern in many villages. It is physically exhausting and frustrating to make home visits either at random or in areas confined to the vicinity of the Basic Health Unit. How can the home visit coverage be improved? How can we organize a systematic home visit schedule and how do we solve the problems of security and transportation?

Different approaches have been taken in some districts as possible solutions to these problems. Joint visits can be made by the Vaccinator and Lady Health Visitor to sections of the village chosen in advance. The women and children of several families can be immunized simultaneously. The physician can be involved in teaching activities. For example, the physician can hold classes at the Out Patient Department for women and children and in the camps, bazars, and mosques for men and boys. These latter settings provide opportunities to motivate fathers and husbads to send their family members for immunizations.

A final issue is maternal and child care. Too few deliveries are attended by Basic Health Unit staff and the reasons for this are numerous and complex. One approach to improving coverage of deliveries is to expand the abilities of the Traditional Birth Attendant by Providing organized training. As an inducement to training, incentives for candidates can be considered.

In conclusion I propose that Primary Health Care at the Basic Health Unit level is not possible unless the attitudes of each staff member are changed. Understanding the concept of Primary Health Care is not sufficient; although much more difficult, the attitudes must be modified. It is the role of the Supervisory Medical Officer or outside agencies and advisors to initiate these changes. The Basic Health Unit staff will not take the initiative to modify its organization without direct encouragement from those in supervisory positions. It is the supervisors' main responsibility and it should be their main contribution.

PRIMARY HEALTH CARE WITHIN THE AFGHAN REFUGEE SETTING

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Introduction

The need for Primary Health Care is a popular concept, often discussed and continually justified. In the reknown 1978 Alma Ata Conference, the World Health Organization summarized a definition as follows:

> "Primary Health Care is essential care made universally accessible to individuals and families in the community by means acceptable to them through their full participation and at a cost the community can afford."

Bringing this laudible ideal into context within the Afghan Refugee setting has meant translation into specific program activity. Toward this end, UNHCR in conjunction with UNICEF, WHO, numerous Voluntary Agencies and the Pakistan Commissionerate have taken action by introducing the Basic Health Unit structure supported by programs of Immunization, Malaria Control, Sanitation, Water Supply, Supplementary Feeding and Maternal/Child Health.

However, even with such an impressive health infrastructure, several serious concerns remain. More specifically there is unfortunate evidence that each one of the above mentioned programs are lacking in a very essential element: that of linking a given service to the community. In our following presentation, we hope to clarify the unfortunate impact of this missing link, and follow with two specific potential solutions.

Problem Identification

Primary Health Care is often based on the well known premise that a very significant proportion of all disease can be prevented by simple measures taken within the home environment. The significance of this premise can be clarified by taking a look at the total number of patient visits reported in 11 Basic Health Units operated by the International Rescue Committee, and assessing patient visits according to their diagnosis.

Of 228,023 patients visits recorded during the first 10 months of 1986 (see Appendix I), the following percentages apply:

	Patient Visits	% of total
Respiratory Tract Infection, Bronchitis, Tuberculosis (suspected and confirmed)	72,967	(32 %)
Eye, ENT and Skin Infections	36,484	(16 %)

Diarrhoea, Dysentary, Worms and other Gastro-Intestinal problems	29,643	(13 %)
Malaria (suspected and confirmed)	18,242	(8 %)
Malnutrition (1st, 2nd and 3rd degree)	6,841	(3 %)

Of this partial list of diagnosis over the last months, it becomes immediately apparent that a large amount of professional effort as well as financial resource has been consumed by illness that is to some degree preventable.

An academic question that immediately emerges is: "To what degree preventable? A potential donor might follow with the question, "How successfully can I protray a Sanitation program in my fundraising efforts?". A program manager might ask, "How can I weigh the costs of investing in Health Education efforts, with their seemingly untangible results; against impressive numbers such as 228,000 visits recorded during the first 10 months of 1986?"

And the discussion of Primary Health Care goes on.

Clarifying the Need for Primary Health Care

A valid criticism of the preceding information is the fact that patient visits tell us relatively little about the health status of an entire population. Rather, patient visits tell us something about a select population who have the means, mobility and cultural freedom to come from the home to visit a Basic Health Unit. This information can be misleading particularly in a culture where women (and their youngest children), have a very limited amount of freedom. What many suspect is that the prevalence of illness might be even greater within tribal groupings where cultural beliefs restrict movement or in areas distant from the Basic Health Unit.

To clarify the question of the magnitude of preventable illness, The International Rescue Committee undertook the task of surveying each of our 11 camps in July of 1986. Our goal was the measurement of Infant and Child Mortality, Nutritional Status, BCG prevalence and several environmental factors that might be related to disease. The rationale for this survey was two-fold: (1) to contrast overall refugee child health status as assessed by UNHCR/CDC surveys with the health status in a very specific area, and (2) to provide a base of information with which we might weigh the costs of a given preventive or curative project with the associated benefits over a period of time.

The survey was carried out in 11 camps sampling 5 clusters in each camp with a minimum of 2.5% of the registered population surveyed. A systematic approach for choosing the 5 cluster sites offered a geographically representative population, while households within each cluster were chosen randomly by three flips of a coin. In total, four trained Lady Health Visitors, under the supervision of an expatriate, interviewed 588 families. Within these families, there had been 888 children alive under five years of age during the preceding 12 months and 861 alive at the time of the interview.

An abbreviated summary of our findings is as follows:

Neonatal Mortality Rate	41 per 1000 live births
Infant Mortality	87 per 1000 live births
(95% confidence interval)	(50 – 122)
Childhood Mortality Rate	118 per 1000 live births
Possible Causes of death	
Diarrhoea	41%
Measles	28%
Tetanus	10%
Unknown	21%
% of children with diarrhoea during preceding 7 days	40%
% of children with BCG scar	69%
% of children with measles during preceding year	14%
Arm circumference measurements:	
median	88%
70 – 80	8%
70	4%
General Fertility Rate	418 births per 1000 women of child-bearing age during preceding year
Drinking Water Source	
Katcha Well	42%
Stream	21%
Improved Well	19%
Spring	11%
Faucet Water	2%
Unknown	5%
Compounds with Improved Latrines	43%
Compounds with Kitchen Gardens	35%
Compounds with Poultry and Livestock	52%

With camp specific information from the survey on hand, we began to make several associations:

– approximately 1 of every 10 pregnant women seek antenatal care

- roughly 15% of all children under five are fully vaccinated
- less than 5% of women of child bearing age have received 2 doses of Tetanus Toxoid
- less than 25% of all families utilize a protected source of drinking water
- under half of all families use an improved pit latrine
- there is a strong correlation between diarrhoea and poultry/livestock in a compound
- areas that are geographically widespread (camps with more than 5 kilometers in diameter), have higher rates of malnutrition

In general, it seems that due to a complex web of social, cultural, political and economic factors, many people can not or will not take advantage of services offered to them by a static Basic Health Unit.

Thus it becomes apparent, that at least four challenging objectives must be accomplished to realize the comprehensive health coverage of refugees that we are all trying to seek:

1) Motivation of a more full utilization of existing preventive and curative services.

2) The specific identification of those who are not able to take advantage of the Basic Health Unit because of cultural restriction or physical disability and the provision of Primary Health Care services in the home or more accessible community setting.

3) The mobilization of refugee community members toward limited and achievable environmental health activities.

4) The spreading of more effective Health Education messages and simultaneous building of a referral network for both preventive and curative health services throughout every refugee village.

With these objectives in mind, I would like to turn to my fellow panel members who will offer some perspective on existing potential within the health infrastructure that can be used to tackle these problems.

INTERNATIONAL RESCUE COMMITTEE
CUMMULATIVE CONSOLIDATED BHU STATS
OCTOBER, 1986

Number of visits per sickness	MEN	WOMEN	CHILDREN 0–4	CHILDREN 5–14	TOTAL
Eye infection	2159	1997	1935	2071	8162
ENT infection	1687	2487	4037	2214	10425
Upper respiratory infection	5162	5759	12418	6536	29875
Bronchitis	4069	4911	8602	3401	20983
TB suspected	1709	2864	1301	1084	6958
TB confirmed	3773	6625	3523	2588	16509
Diarrhoea	1142	1356	5390	1797	9685
Dysentery	1910	1866	5120	1904	10800
Worms	1256	1314	1959	2808	7337
Other gastric problems	1957	2127	1403	864	6346
Urinary tract	1979	1884	410	567	4840
Nervous system/epilepsy	955	556	63	110	1684
Joints/Bones	1746	1675	67	433	3921
Skin Disease	5770	3963	5219	6058	21010
Malaria suspected	2824	3940	4856	4030	15650
Malaria confirmed	679	679	595	830	2713
Fever (PUO)	928	835	2148	987	4898
Anaemia	1080	4353	1174	1173	7780
Gynaecological	0	3776	3	4	3783
Obstetric	0	1930	0	0	1930
Dental	511	629	96	395	1631
Coronary disease	683	453	9	51	1196
Hypertension	1513	3559	0	4	5076
Diabetes	363	165	3	3	534
Anthrax	29	2	4	5	40
Measles	11	12	219	205	447
War injury	482	106	9	37	634
Viral Hepatitis	152	229	98	85	564
Mumps	31	39	126	344	540
Aches & pains	3797	6597	16	533	10943
Psychiatric	747	321	32	44	1144
Burns	86	223	475	328	1112
Asthma	1294	1716	119	399	3528
Chicken pox	3	3	53	89	148
Cancer	103	38	1	16	158
Dogbite	126	37	8	119	290
Whooping cough	6	5	59	81	151
Other (Specified on attached listed if necessary)	1370	1337	1039	734	4523
Total	52092	70368	62589	42931	228023

STATS FROM MCH: No. of cases

Malnutrition:	1st degree	5375
	2nd degree	1394
	3rd degree	287
Total Malnutrition		7056

No. of births	1099
No. patients referred to government hospital	779
No. of deaths	93

THE ROLE OF COMMUNITY WORKERS IN PRIMARY HEALTH CARE

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SAVE THE CHILDREN FUND
NORTH WEST FRONTIER PROVINCE

Introduction

Save the Children Fund (S.C.F.) began a Primary Health Care (P.H.C.) programme in Badaber camp in 1984, because it was felt at that time that the existing curative service being offered by the Basic Health Units (B.H.Us) in the refugee camps was not meeting the long term health needs of the Afghan refugee community. In the interim period the programme has evolved and expanded considerably and I would like to concentrate on a specific area of the programme – the supervisors and volunteers trained to promote community health in the refugee camps.

Training of Community Health Supervisors.

In camps selected for P.H.C. programmes, one Community Health Supervisor (C.H.S.) is selected from the community for every 7,500 refugees. Training involves the supervisors coming to S.C.F.'s training centre near Peshawar for an initial five week period of training. They then return to their camps for two weeks to select volunteer Community Health Workers (CHW's) each to be responsible for 30 families in the camp. These are the volunteers the supervisors will train on completion of their own training.

After approval of volunteers by S.C.F. teachers, the supervisors return to Peshawar for the final five week part of their training course which now includes teaching practice. All suprrvisors undertake an end of course assessment, in addition to the continuous assessment throughout training.

Training of Community Health Workers.

Provided supervisors meet the standards set by S.C.F., they return to their camps after training with their teaching kits and manuals and begin the training of volunteers. This volunteer training course lasts approximately 3 months, with one two hour lesson every day. The first month of volunteer training is intensively supervised by S.C.F's teachers, after which supervision is gradually reduced.

At the end of volunteer training, S.C.F.'s teachers assess the volunteers to ensure they have reached a satisfactory standard. A kit of basic medicines and equipment is then issued to the volunteers to allow them to begin their work as health workers within the camp community. The training programmes are graphically presented in table 1.

TABLE 1

C.H.S. and C.H.W. Training Programmes

Weeks	Purpose	Location
1		
2		
3	Training in	Badaber
4		
5		
6	Selection of	Camp
7	CHWs	
8		
9		
10	Training in P.H.C.	Badaber
11	and teaching practice.	
12		
13		
14	Close supervision	
15	of C.H.S. training	
16	CHWs.	
17		
18		Camp
19	Reduced supervision	
20	of CHS training CHW's.	
21		
22		
23		
24		

WELCOME ADDRESS

MR. KEVIN LYONETTE
CHIEF OF MISSION
UNITED NATIONS HIGH COMMISSIONER FOR REFUGEES
PAKISTAN

Mr. Minister, Your Excellencies, Colleagues and Friends.

Let me begin these few words by saying that first of all as I am sure most of you know I am not a doctor. This is the Seminar on Afghan Refugee Health Programme but I feel it to be my duty as the Representative and Chief of Mission of the High Commissioner for Refugees to say you, Mr. Minister, on behalf of the High Commissioner, that how much UNHCR appreciates the extraordinary, if not indeed unique welcome asylum friendship and generosity that the people and Government of Pakistan have given to so many millions of Afghan Refugees over the last years. We do appreciate it and would say we are very happy to be able to work in close cooperation with your own ministry and with that of the Chief Commissioner. I am sure that in years to come as we try to find the decent and the honourable solution to the Afghan problem that collaboration and cooperation will continue. Let me now perhaps in my unprofessional way not being a doctor turn to the subject of health. Health, its existence and the benefits comes from it is absolutely fundamental to the success or otherwise of the refugee assistance programme that we and the Government of Pakistan in conjunction with our Donors or diplomatic colleagues and our United Nations sister agencies try to carry out here in Pakistan. Health impinges on all aspects of the refugee programme. In education, health education, water supply, sanitation, the prevention, and curability disease so that Afghan Refugee can be healthy, productive and useful within this great country Pakistan which has given them such a generous asylum. Even in terms of income generation, self help, employment, the building of roads, the provision of electricity within their own refugee villages. Refugees cannot do these things unless they are healthy and it is you, it is your ministry Sir, it is your administration Chief Commissioner and it is on the whole let me say the cooperation of the international community which has allowed us to reach what I would call a crucial moment in the Afghan Refugee Health Programme. For a few seconds, let me talk about what are our aims, policy and the financial aspects of this programme. In 1986, UNHCR has spent over 8 million dollars in health within the Afghan Refugee Health Programme. That means a lot even though the number of refugees I would say is such that we perhaps need more. I am happy to tell you that our budget for 1987 as I was just informing the Secretary of States and Frontier Regions has been approved and will forward smoothly as from 1st of January 1987.

The basic element is not simply the question of money, it is a question of work between those concerned and here I would like again to emphasize what I have said eversince I became the Chief of Mission in Pakistan that in matters concerning Afghan Refugees whether it be health whether it be any other issue, UNHCR and the Government of Pakistan do speak and will speak with one voice. We have a concerted policy and we will attempt to carry out that policy in a decent, effective and well managed way. Within that frame work, I would like to pay tribute to the coordination the help I have already mentioned-that we get from our sister agencies in United Nations particularly if I may say so that World Food Programme whose Representative, Mr. Essayem is with us this morning-but also from the Voluntary Agencies without whom this

Table 2

Main Topics from CHS Curriculum

1) P.H.C.

2) Mother and Child Health.

3) Nutrition and Malnutrition.

4) Immunization.

5) Hygiene, sanitation and water.

6) Diseases and infections.

7) Treatment of diseases and infections.

8) First aid.

9) Referal and report system.

10) Health education and teaching methodology.

If we accept the idea that supervisors and volunteers can be adequately prepared for their jobs, there then arises a second question.

Question 2 : How can the supervisors and volunteers be best used to improve the health status of the refugees in the camps?

CONCLUSION:

Refer back to the objectives set by Mr. Campbell in his presentation. The potential for achieving all of these lies at least partly in the network of supervisors and volunteers that can be established in refugee camps. There is a clear line of management for the mobilization of this network to improve the health status of the refugee population in the camps.

Line of management, showing community link.

Medical Officer

Community Health
Supervisor

Community Health
Worker.

Refugee families

This potential has recently been utilized for a successful immunization campaign in Haripur. There is no reason why Community Health Supervisors and Community Health Workers could not be used in numerous other ways to improve the health of refugee communities.

JOB TITLE :	Community Health Supervisor.
RESPONSIBLE TO :	B.H.U. Medical Officer.
CONDITIONS OF WORK :	Normal B.H.U. hours, when not running a C.H.W. training course, plus some evening for visiting CHWs as required.
SALARY :	Rs. 800/= per month.

KEY TASKS.

1) To conduct training courses for C.H.Ws.

2) To supervise the work of the CHW's.

3) To inform CHWs of any referal from the B.H.U.

4) To assist with drug resupply to the CHWs.

5) To collect disease and medicine report forms from CHWs.

6) To assist in any approved community health projects.

7) To undertake the samework as a CHW whenever possible.

JOB TITLE : Community Health Worker.

RESPONSIBLE TO : Community Health Supervisor.

CONDITIONS OF WORK : Unpaid community worker for Primary Health Care in his spare time.

KEY TASKS.

1) To make regular home visits to his 30 families.

2) To provide P.H.C. to his 30 families whenever required.

3) To complete disease and medicine report forms about his work.

4) To act on referals from the B.H.U.

5) To assist in any approved community health projects.

6) To teach his 30 families every thing he has learned during his training.

ENVIRONMENTAL HEALTH SERVICES FOR AFGHAN REFUGEES: ACTION PLAN FOR 1987

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PREAMBLE

The range of activities by the United Nations High Commissioner for Refugees (UNHCR) with regards to the provision of adequate Environmental Health Services to the Afghan refugees is huge. The services, largely funded by UNHCR are delivered by the Pakistan government and diverse voluntary organizations based in Pakistan. The services cover the following areas:—

(a) Water Supply
(b) Human-waste disposal
(c) Solid-waste management
(d) Waste-water drainage
(e) Insect-vector control
(f) Rodent-vector control
(g) Community-health education

While these services are in general available to the refugees, priorities have been given especially to provision of adequate water-supply, sanitary facilities for human-waste disposal, insect-vector control and community health education. The presentations by Dr. Dan Blumhagen, Project Director, Pakistan Red Crescent and Mr. Abdul Zahir, Sanitary Engineer, International Rescue Committee and data obtained from the Public Health Engineering Department of Pakistan indicate that laudable achievements have been made in terms of the number of systems constructed for water-supply and waste-disposal. For the sake of brevity, the statistics on the number of these systems will not be reported here. However, there is need to categorically state here today that while these achievements are tangible and laudable, it should not be forgotten that successful environmental health programs are measured in the number of healthy people in the community, rather than in the number of facilities built and not used nor maintained (Pineo et al, 1981).

CURRENT HEALTH STATUS

While the refugees in general appear healthy, morbidity rates related to Diarrhoea, Dysentery and Malaria are high. Table I and Table II are used to present a consolidated provincial report for out-patient visits for Gastro-intestinal and Parasitic diseases in NWFP and Baluchistan for Govt/UNHCR operated Health Units.

TABLE I

Out-patient visits to Govt./UNHCR BHUs for Gastro-intestinal and Parasitic Infections – July-September 1986 – NWFP*

NATURE OF DISEASE		MEN	WOMEN	CHILDREN 0–4	CHILDREN 5–14	TOTAL
Diarrhoea	July	1643	1496	7068	3025	13232
	Aug.	1603	2502	4185	2232	10572
	Sep.	2053	1707	4064	1569	10493
Dysentery	Jul.	1806	1346	2206	1744	7102
	Aug.	1426	1114	2560	919	6019
	Sep.	1848	1562	1482	1544	6440
Worms	Jul.	927	920	1240	1789	4876
	Aug.	998	926	1634	1628	5186
	Sep.	1390	1272	1605	2200	6467

TABLE II

Out-patient visits to Govt./UNHCR BHUs for Gastro-intestinal and parasitic infections – June-July 1986 – Baluchistan*

NATURE OF DISEASE		MEN	WOMEN	CHILDREN 0–4	CHILDREN 5–14	TOTAL
Diarrhoea	June	1183	952	3101	1955	7191
	July	1301	1161	3334	2225	8021
Dysentery	June	533	461	532	496	2022
	July	615	619	581	635	2450
Worms	June	541	410	516	704	2171
	July	595	516	689	102	2820

*Data obtained from the PDH Monthly Reports from the Provinces.

Apart from respiratory infections, gastro-intestinal and parasitic problems appear to be major causes of visits to the Health centres. Although the data contained in Tables I and II represent the number of visits and do not accurately reflect the prevalence rate of these diseases in the refugee villages, they are useful in terms of presenting morbidity patterns in the refugee villages.

A recent study conducted by the center for disease control, Atlanta (1985) to determine infant-mortality and nutritional status of the refugees showed that in general, 34% of all childrens' death were related to diarrhoea while 1% of all childrens' death was due to Malaria. Provincially, Baluchistan had 36% diarrhoea-related deaths (children) as against 31% for North West Frontier Province and Punjab. While the relationship between water and disease outbreak is not fully understood, a veritable avalanche of published data (Pineoetal, 1981, Feachem, 1981; Cutting, 1982) have shown that gastro-intestinal diseases such as Dysentery, Diarrhoea and Typhoid are related to poor sanitation and contaminated water. From the CDC Survey and a recent study carried out in Pakistan by UNICEF (1986) it seems reasonable to suggest that inadequate sanitary facilities and impure water have contributed in general to high prevalence of gastro-intestinal and parasitic diseases among the refugees. Dr. Halfdan Mahler, Director General of the World Health Organization noted that "even a modest improvement in the basic sanitation in the developing countries would go far toward reducing the incidence of parasitic and other communicable diseases, especially, enteric diseases" (1982). Dr. Mahlers observation aptly applies to the Afghan refugees when viewed within the context of the World Health Organization's goal of "Health for All" by the year 2000. It becomes imperative therefore that health programmes designed for the refugees should not only aim at reducing the number of deaths but should also strive towards reducing morbidity rates in the refugee villages by controlling negative factors in the environment.

PROBLEM AREAS

A. Operation and maintenance: Development of maintenance facilities should clearly be part of an integrated plan for all Environmental health projects. At present, it is minimally so. Even though deficiencies in the existing systems are related to design parameters a, large proportion of the deficiencies (80%) are related to poor maintenance.

B. Improper drainage arrangements for disposal of waste-water. This problem has led to the creation of breeding sites for mosquitoes and has contributed to the current upsurge in malaria incidence.

C. Absence of garbage bins for disposal of personal and community refuse.

D. Lack of Motivation on the part of the staff working for refugees.

E. Inappropriate training for sanitarians (environemntal health workers).

1987 ACTION PLAN FOR ENVIRONENTAL HEALTH SERVICES FOR THE REFUGEES.

Based on the above listed problem areas, the UNHCR action-plan for water-supply and sanitation in 1987 will give priority to:

1. **Technical guidelines for water-supply and sanitation systems**: A major step towards effective quality control will require the establishment of technical guidelines for the design, operation and maintenance of water-supply and sanitation systems for the refugees. For example, specifications for slabs, squat-holes, vent-pipes, vent-pipe screens, squat-hole cover and pit-depth for areas with good soil conditions and acceptable ground water levels will be addressed. Design specifications for areas with poor soil structure and high water table will also be addressed.

2. **Operation & maintenance**: It is not enough to establish systems without adequate provision for upkeep facilities and a genuine effort to monitor the progress of these systems. To this effect,

maintenance teams with adequate training will be created to ensure effective operation and maintenance of water-supply and sanitation systems.

3. **Water-quality**: Pilot studies on the bacteriological quality of water show that water from unimproved wells and uncovered improved wells are contaminated. Plans are underway to chlorinate these water sources and if possible cover them with low-cost manually operated pumps inorder to prevent further contamination by pathogenic organisms. The pump manufactured will be a self-reliant project. Inorder to avoid a high-failure rate, choice of pump design to be manufactured will depend on (a) cost of manufacture (b) ease of operations and maintenance by refugees, (c) local availability of replacement parts and (d) reliability and efficiency. At the present time, laboratory and field tests are being conducted to evaluate various hand-pumps with regard to engineering integrity, volumetric efficiency and ease of operation.

   For both piped water schemes and non-piped water schemes a structured approach to monitoring the bacteriological quality of water will be introduced. For instance, if a tube well/percolation well or a shallow well is chlorinated (where needed), there should be an entry book which shows a systematic reporting of the following: Location of the Water-system; quantity of bleaching powder added; time of chlorination; free residual chlorine reading; time the free residual chlorine was measured and the name of the operator. The data book should be protected from rain and other untoward effects.

   For PHED operated schemes, the success of the data-keeping procedures for chlorination will require the personal involvement of the executive engineer in terms of planning and execution. In addition, we anticipate setting up a field laboratory for on-site bacteriological testing of water in NWFP, Baluchistan and Punjab. When established, these facilities will complement the present PHED efforts and reduce the distance between the "sample" source and place of examination. For Refugee villages served by only piped water-schemes, every effort will be made to establish shallow wells where feasible. These wells will be used when there is a pump breakdown or load shedding of electricity.

4. **Drainage**: Proper drainage arrangements for waste-water in all constructed water-systems will be improved. Whether the water system is administered by the Public Health Engineering Department or voluntary organizations, provisions should be made for constructing a 10ft. by 10ft. (3.28m by 3.28m) concrete apron connected to a concrete drainline and extended 10ft. (3.28m) away from the apron. The drainline should empty into a protected soak away pit or channelled to refugee gardens. The sharp increase in malaria incidence and morbidity justify the need for a more effective waste-water management.

5. **Garbage disposal?**: Garbage disposal bins will be established in all BHUs, SHUs and CHUs. There will be two bins – one should be for disposal of burnable materials and another one for disposal of hazardous materials (needles, syringes, razors etc.). The burnable materials should take place in a 1 meter pit while the hazardous materials should be burried in another one meter pit. For safety purposes, these disposal pits should be protected from public entrance.

6. Explore the possibility of building privy vent-pipes from locally available materials.

7. **Staff Motivation**: There is a critical need for continuous motivation of the staff serving the refugees inorder to give support to our desired objectives. For some of the staff, it is only a

job. Ideally, staff identification with the relief efforts should be encouraged by creating an environment which will be motivating.

To this effect, efforts should be directed at:

(i)	Responsibility	– Everyone working for the refugees should have a clearly-defined responsibility where possible.
(ii)	Achievement	– Help each person accomplish the right tasks.
(iii)	Recognition	– Give each person personal recognition for his/her achievements.
(iv)	Development	– Help each person grow.

8. **Appropriate Training for Sanitarians:** We plan to collaborate with the Pakistan government and voluntary organizations to re-orient and improve the skills of the sanitarians. Most of the sanitarians are presently performing a multitude of tasks unrelated to sanitation. In 1970, the World Health Organization Expert Committee on National Environmental Health programs in one of its recommendations stated that "in building up a national body of environmental health workers, efforts should be made to establish a structure in which functions are clearly defined and job descriptions are in noway derogatory." Furthermore, the WHO as far back as 1954 made it abundantly clear that the "fundamental principle in the utilization of sanitation workers is that each shall be employed to the full extent of his or her ability and training." Given the present disorientation and confusion as to the roles of our sanitarians we plan to adopt a competency-based approach to the training of sanitarians in an attempt to delineate their specific roles and responsibilities. The philosophy behind the competency-based approach to training is that it primarily allows an individual to be trained to a level where he/she should be able to perform identified tasks, especially in the field (Adrounie and Chelikowsky, 1984). Corcoran (1965) notes that the competency-based approach begins with the "definition of the knowledge, skills and attitudes required for successful performance in aparticular role". We hope that before long, our sanitarians would have accummulated enough technical skills which will help them contribute to a more sanitary environment both within the refugee villages and local population.

9. **Community Involvement:** At this point in our endeavour, I feel that it is appropriate to involve refugees in our environmental healths programmes. The starting point for refugee participation in controlling environmental health problems in the RVs would be the establishment of a Refugee Village Health Committee. The RVHC should comprise the refugee village administrator, the religious leaders, the school teachers and other capable and dynamic people in the refugee villages. The RVHC should organize and mobilize refugees to address environmental health problems related to (a) cleaning of bazaars, (b) protection of meat from fly-infestations in the bazaars, (c) digging proper drainage systems to prevent the creation of stagnant ponds, (d) preventing children from using sling shots to destroy PVC vent-pipes in latrines, (e) protection of taps (spigets) in distribution tanks and standposts and (f) cleaning of tank surrounding. The RVHC roles are of critical importance particularly in maintaining a clean environment. It has to be made clear that community involvement does not occur by accident. It requires a

systematically planned effort. One of the major advantages of refugee involvement is that it will help provide information on the socio-cultural and economic values of the refugees.

10. **Health Education**: Latrine utilization by the refugees has largely been promoted through the efforts of lady health visitors, community health motivators and school teachers. Through various health education approaches, these health agents have effectively communicated the social and health benefits inherent in using the latrines. However, there are still a few socio-cultural barriers to surmont. These barriers have resulted in limited utilization of the privies by the menfolk. Our goal therefore is to gradually ensure that Males, Females and children alike utilize these privies. Obviously, this is going to be a formidable task. But when one looks back to the history of these privies and the initial difficulties encountered in the attempt to get the refugees to utilize them, one has to conclude that UNHCR in collaboration with the Pakistan government and voluntary agencies have come a long way. Our success in this particular area should be an eye opener to all of us and a constant reminder that 'Culture' is never static.

    In a speech presented at the XI International Conference on Health Education held in Hobert in 1981, Dr. Mahler, Director-General of the World Health Organization, pointed out that health workers have a tendency to blame 'culture, apathy and illiteracy' when they fail to effectively communicate health messages to the people. According to him, invocation of culture as an obstacle to Health Education should be seen as "an escape mechanism since culture is ever-changing and it is our duty both to conform to culture, to understand it, and to accelerate its evolution in the right direction."

10. **Surveys**: A sanitary survey will be performed on an on-going basis to identify various factors related to latrine design, latrine utilization and shallow well chlorination.

11. **Evaluation**: In order to ascertain that programme objectives and public health standards are met, evaluation of various projects should be carried out periodically.

Conclusion: Environmental health programmes for 1987 will require a strong committment on the part of everyone associated with the relief efforts. Total dependence on UNHCR for operation and maintenance of water-supply and sanitation systems in the long run will only undermine UNHCR efforts. Therefore, full commitment by the Voluntary Agencies and support from the Pakistan Government will go a long way towards the achievement of the 1987 goals.

PICTORIAL HIGHLIGHTS OF SEMINAR



Recitation from Holy Quraan — Inaugural Session
Left to Right: Qari Obaid-ur-Rahman, Col. Altaf-ur-Rahman, Brig. (Retd) Said Azhar, Minister Syed Qasim Shah, Mr. Kevin Lyonette, Dr. Claude Aguillaume



Inaugural Address by Chief Guest, Minister Syed Qasim Shah, Federal Minister for States and Fronter Regions, Kashmir Affairs and Northern Areas

programme could not work. There is no other way of putting it. The work done in NWFP and Baluchistan by the fifty Voluntary Agencies who work within the health programme is absolutely invaluable and I cannot express to you how deeply we in UNHCR appreciate that. I said we had a crucial moment because as indeed the Chief Commissioner has just mentioned we are moving from the curative to the preventive, we are moving to an emphasis on maternal and child health, we are moving to instead of as it were a voluntary agency in those first emergency moments of a refugee programme coming in the curative, distributive sense as it were of medicine. What we would like now within the policy frame work agreed between us and the Government of Pakistan is the qualitative assistance, guidance, help of the Voluntary Agencies who work within the programme. We are trying more and more-and this is what we will do in 1987-to involve the Afghan refugee community itself in its own health and the community levels. In questions of sanitation, in questions of hygiene, in questions of health education, in questions of clean water and indeed in basic questions of such as food and nutrition. To help us in that task Mr. Jean-Pierre Hocke, United Nations High Commissioner for Refugees when he came and visited Pakistan earlier this year came back to Geneva and immediately asked for a high quality team of medical advisors to be sent to the Chief of Missions' office in Islamabad.

With the help of everyone concerned, we can really help refugees to help themselves.

PICTORIAL HIGHLIGHTS OF SEMINAR



Panel Presentation: Session I Primary Health Care and Health Education
Left to Right: Dr. Alex Forro, Mr. Bruce Campbell, Mr. Philip Appleton



Panel Presentation: Session II Water Supply and Sanitation
Left to Right: Mrs. Mamoona Taskin-ud-Din, Dr. Peter Okoye, Dr. Dan Blumhagen, Mr. Abdul Zahir

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EDUCATION AND EVALUATION IN SANITATION PROGRAMMES

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SANITATION AND BASIC HEALTH PROGRAMME FOR AFGHAN REFUGEES

At this point, almost seven years into the Afghan Refugee situation, it is well to look back at what has been done so far, and then plan the next steps to take. Over the next few minutes, I'd like to focus on a number of things that we learned when evaluating the effectiveness of our sanitation projects, and then some things that are being done to increase that effectiveness by increasing the educational input. As most of you know, I've been associated with both the Austrian Relief Committee sanitation project as well as the translation of the UNICEF project into the Pakistan Red Crescent Society, so much of what I have to say concerns both of these two project. For the rest, I'm extremely indebted to many who have a greater right to be speaking here than I.

When we evaluated the effects of the ARC sanitation project last year, we found a number of things that are important as we discuss the future of sanitation in the current situation. The projects themselves involve motivating the refugees to construct latrines, and provide them with a slab and pipe. It's important to realize that getting people to construct latrines may be as significant in changing behavior as are the parts of the programme which are labeled "motivation and education". The point here is that the teaching efforts are combined with a major emphasis on action: that is, *telling is linked with doing.*

I think this is really the first point that I'd like to make. I suspect--and everyone that I've talked to who has field experience here agrees--that any teaching program which does not directly and immediately move people to act will have little significant impact.

There are a few points I'd like to make from the results of the evaluation. Looking first at the results of the men's questionnaire, as the first table indicates, only 28% of the men claimed to have used latrines in Afghanistan, and the same percent used them in camps where ARC has not worked. However, where ARC has been active, 66% of the men claim to use it. If they are truly reporting how they behave, this is a significant accomplishment! Of course, the feat of improving the latrines from 20% acceptable design to 86% is also noteworthy. In short, the sanitation programmes are having some of the desired impact. By the way, notice that simply moving to a refugee camp initiated a 60% increase in the number of household latrines, and a three fold increase in the number of sanitary ones.

Table 1

Having and Using Latrines in Afghanistan and Pakistan
Men's Questionnaire

	No Sanitation Programme	Sanitation Programme
Have Latrine in Afghanistan	49% (7%*)	53% (6%*)
Have Latrine in Pakistan	78% (20%*)	99% (86%*)
Used Latrine in Afghanistan	26%	29%
Uses Latrine in Pakistan	27%	66%

*Percent of latrines which have an acceptable design: either VIP or traditional pit.

A second result I'd like to mention was the response to the question "What are the advantages of the new latrine design?" These results are shown in Table 2. What I find interesting is that, while in the past we've put a lot of emphasis on the advantages of building latrines so women can maintain Purdah, this was one of the less important advantages given by the men for building latrines. Since one regular observation that's been made about these programs is that men use the latrines less than women, perhaps we should change this emphasis. This is my second main point: *We must continuously re-evaluate what we are teaching to see whether it is having the desired result.*

Table 2

Advantages of VIP Latrines over Traditional Design
Men's Questionnaire

Design Advantages

No Smell	11 (13%)
Covers Excreta	36 (43%)
Decrease Disease	12 (14%)
Purdah	10 (12%)
Don't Know	14 (17%)
Total	83

While there was a great deal more that I could talk about from the men's side, I'd like to leave you with these two observations and now turn to the women's side of the evaluation. Women in camps where the programme had been active were much more likely to know the correct causes and prevention of Diarrhoea than those in the non-programme camps. In programme camps, women were much more likely to report washing after using the latrines, as well.

These results are good, because it means that some of the message is getting through. It'd be nice to be able to observe changes in behavior so we know that people are really doing what they need to do, and not merely learning the right answers to the questions! So, in addition to asking questions, I had my interviewers look around the household. The most cogent factor in excreta disposal is whether there are piles of faeces present in the household or in the camp area around the household. Table three shows the results:

The first observation is that by the end of an initial campaign, one can reduce the number of piles of excreta inside the households by over sixty percent. That's an impressive result. The bad thing is that almost as soon as the campaign is finished, the new practices start dropping off, and somewhere between year one and year five camp sanitation, as measured by this very visible factor, returns to the baseline. It is almost as if the project had never been done. Unfortunately, the second half of this table reinforces the lesson. While it appears to be possible to reduce the excreta lying around the camp by fifty percent during a sanitation campaign, the effects of that campaign have worn off within a single year. Now, these are rather insensitive indicators: I think there are long term effects that this type of observation can't measure. Nonetheless, there are two major lessons to be learned here. The first is that sanitation projects must be continuously active in the camp if the gains made by a project are not to be lost.

Table 3

Women's Questionnaire

Percent of Households with Excreta Inside Compound

No. Program	Program Just Completed	Program One Year Before	Program Five Years Before
47%	18%	30%	43%

Percent of Housholds with Excreta Outside Compound

No Program	Program Just Completed	Program One Year Before
84%	41%	86%

The second lesson is rather discouraging. What is not clear from the table is that the results shown for after five years were taken from a camp that was at the end of a follow-up sanitation campaign. Even after a team had spent several months working in the camp, the good results that we see in untouched camps could not be regained. Apparently, once people have first been introduced to new ways, tried them and gradually abandoned them, it is much more difficult to motivate them again. This really underscores the first of these lessons: Sanitation projects must be considered to be a continuing effort rather than sporadic campaigns if they are to have lasting effects.

I think that these observations are what's behind the debate between those who say that the sanitation projects have no effect and those who are puzzled by this accusation because they see so much change during the project span. The effects are real: unfortunately, like most attempts to change human behavior, they're transitory. If this is true, then we need to consider what type of work is needed to produce lasting change, that is, what types of educational programs we need to be implementing.

Briefly, there are two ways of changing educational programs so they become more effective: we can change the people who are the target for our efforts or we can change the way we teach people. Since the teaching methods are largely dependent on the type of project and the target group, I intend to talk about both at the sametime.

Household visits are still one of the few ways to reach women, and to motivate them to change the way they live. Here, too, we need to look at our materials and methods and adapt them to be most successful. The PRC Lady Health Visitors are often using the "Half the Faith is Cleanliness" charts, which were initially prepared by UNICEF and UNHCR, and which, I believe, are currently under revision. As we were reworking our programme, we have rearranged the charts so that a story can be told from them, and are experimenting with having women who have heard the story before tell it to the others in the household. Indeed, now when our LHV's enter households they're often greeted with the request, "Show us the pictures". The enthusiaism and repetition help ensure that the right message is being learned. At the same time, we're trying to motivate the women to take immediate action to clean their households.

In addition to household visits, other agencies are making strides with teaching groups of women, either through the BHUs or other groups that they can form. I assume you can discuss these at the education workshop section of these meetings. One thing that I'd like to particularly point out is that sanitation messages can be made a part of other teaching, without much additional effort. I have here a doll, made by Mrs. Alling of CHREP in Mansehra. While it is primarily used to teach oral rehydration therapy, it's made wearing chapplis, and she and her staff have a series of jokes about wearing shoes so the child won't get worms. She tells of women coming to her saying that now their children are wearing shoes so they won't get worms. Other groups are working on other techniques.

Incidentally, as far as I know, there have been no problems with using either pictures or dolls in teaching Afghan Refugees.

Now, while there are a lot of people who have made tremendous contributions to this work, but time doesn't allow me to describe all the programs I'd like to. I'd like to close by focusing on a single project.

Since sanitation involves the development of lifelong habits, one of the most fruitful approaches in the long run may be to try to teach children to behave differently from their parents. Gabby Steiner of ARC has developed a training course for teachers in the RVA schools that I'd like to describe in closing. They've just finished their first cycle of training, so it's too early to know what the results are, but what I've heard impresses me. The subjects covered in the eight or nine week curriculum are shown in Table 4. However, there are a number of principles that are worth emphasizing. (Table 5) Probably the most important point is that the training course operates while the teachers are in school, in the camps where they are teaching: They are taught what to teach, and then are observed teaching it the very next day: Teaching is linked with doing! This is unlike many courses where training is done during school closures, and therefore I feel it is more likely to be effective. Secondly, they are committed to teaching techniques other than either lectures or rote learning, and so rely heavily on role play, Poems and songs, and the children (and staff) drawing posters illustrating the lesson. Thirdly, there is the link to action. For example, beginning with the fifth week of the class the children are inspected for personal cleanliness, and each teacher was made responsible for his class. Gabby reports that over the time of the programme, there was a complete change in personal appearance, not merely in the school children themselves, but also in their siblings. Also, during the section on nutrition, gardens are started in the schools for each class, and each child is encouraged to start a one meter garden at home, and is provided seed when the plot is ready.

Two afternoons a week there are separate programmes for the mothers and fathers of the school children, where they talk about the lessons of the week and demonstrate the skills learned. They have also experimented with pupped shows.

Table 4

Austrian Relief Committee
Teacher Training Curriculum

Week:	Subject:
1.	Latrines
2.	Water
3.	Hygiene
4.	Diarrhoea
5.	Nutrition
6.	Vaccination
7.	Transmission of Disease
8.	Malaria & review
[9.	(potential) First Aid]

Table 5

Austrian Relief Committee
Teacher Training Program Principles

1. Trains the teachers in their own schools.

2. Teachers Techniques to allow Teachers to Avoid both Lectures and Rote Learning
   a. Role Play
   b. Poems/Songs
   c. Drawing Posters

3. Link to Action
   a. Inspection of Children for Personal Hygiene
   b. Introduction of home gardens.

4. Parents Meetings

5. Follow-Through

Besides school children, what other natural groups are there who could be targeted for a project like this one? One of the ones I've been interested in are the food sellers in the bazaars. Even given the restrictions, a lot could be done to improve things there. More work could be done in Mosques, and possibly the Madrassas often attached to the mosques. Since one of the main social interactions women have is when they go out to wash clothing, I wonder if anyone has considered trying to use wash sessions for teaching? Of course, other groups exist, and I'd like to hear some discussion of who these are and how to reach them.

In closing, there are two pleas I'd like to make. The first of these is for a commitment to ongoing program evaluation so we can determine which teachniques are most effective with these people. This is the only way that we will be able to make progress. Secondly, there is the need to continuously share the information we've learned, so that successful innovations can be rapidly shared and implemented.

Table 6

Main Points of Discussion

1. TEACHING MUST BE LINKED WITH ACTING

2. TEACHING MUST BE CONTINUOUSLY RE-EVALUATED

3. SANITATION PROGRAMMES MUST BE CONTINUOUSLY ACTIVE IF THE GAINS OF A CAMPAIGN ARE NOT TO BE LOST

4. SPORADIC SANITATION PROGRAMMES RAPIDLY LOSE EFFECTIVENESS

5. NEED COMMITMENT TO ONGOING PROJECT EVALUATION

6. NEED COMMITMENT TO SHARING EXPERIENCE

IMPROVING THE QUALITY OF WATER: PRACTICAL INTERVENTIONS

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NORTH WEST FRONTIER PROVINCE

Introduction

The International Rescue Committee (IRC), has been providing medical services for Afghan Refugees in the Kohat District of the NWFP since 1980. At present, we are operating 11 Basic Health Units and maintain a monthly average of more than 38,000 patients visits.

Beginning 1985, IRC assumed responsibility for Sanitation Programs in Kohat District and Orakzai Agency. In 1986, we began with the responsibility for developing Water Supply in the camps between Hangu and Thal. As of November 1986, we have:

1) Constructed more than 7,000 concrete slabs.
2) Completed more than 4,500 latrines.
3) Held more than 4,000 Health Education sessions in the school and BHU setting.
4) Improved and maintained more than 40 wells and.,
5) Constructed 5 spring fed water supply systems.

Background

As both topics of Health Education and Sanitation are being covered by my fellow panel members, I am hoping it will be most useful to move on to the topic of Water Supply.

Perhaps the most common denominator for selection of sites for Refugee Villages is the lack of agricultural value. A primary reason for lack of agricultural value is the absence of water. Therefore, in many camp settings we have to address the issue of both quantity and quality of available water.

What has become apparent to all of this in the room, is that Diarrhoea is the single largest cause of both illness and death amongst the Afghan Refugees population. (The most recent CDC/ UNHCR Infant and Child Mortality survey suggests that as much as 34% of all deaths in this age group could have been caused by Diarrhoea). Many other water related disease such as gastroenteritis, intestinal parasites, eye and ear infections, and skin infection are also directly correlated to inadequate supply of clean water. Thus, if we could simply guarantee safe drinking water and motivate refugees in the use of water in maintaining personal hygiene, we would likely see a dramatic improvement in overall health status.

UNICEF, having a rich history in many countries, recognized this concern early and attacked the problem in 1981 beginning with the improvement of shallow wells. Piped water schemes and transport of water by truck to static tanks was also initiated where shallow wells were inadequate. A fine report by Leo Glenswig of UNHCR (appendix 1), suggests that shallow wells are by far the most cost effective at approximately Rs. 9.50 *per capita* per year. This can be compared with Rs. 21.20 for Tubewell Schemes and 165.70 for Water Tanker systems.

PICTORIAL HIGHLIGHTS OF SEMINAR



Panel Presentation: Session III Nutrition
Left to Right: Dr. Aurora Fermo, Dr. Evelyn Mary, Dr. Naveeda Bano, Dr. Barbara Arend, Dr. Abdul Rahman Zamani (not in picture, Dr. Mushtaq Khan)



Participants at Seminar

The Problem

Although it seems obvious that the solution lies in the improvement of shallow wells throughout areas settled by refugees, several major obstacles remain.

This familiar scene (see appendix 2), helps to demonstrate that although a top-ring and sloped apron help to keep rain water out, the bottom of every bucket full of water recontaminates the drinking source. This has been unfortunately supported by laboratory tests indicating numerous coliform even within 24 hours of chlorination. The quality of water in an improved shallow well is probably very similar to that of a household katcha well.

Possible Solutions

1) Continue with the improvement and maintenance of shallow well giving priority to areas which are underserved based on a *per capita* availability of drinking water (appendix 3).

2) Provide well covers at an approximate cost of Rs. 220 for every improved well (appendix 4).

3) Chlorinate all improved wells on a systematic basis fulfilling both chlorine demand and residual chlorine needs of all improved shallow wells (appendix 5).

4) Test water on a regular basis to maintain the balance between safe drinking water and poor taste.

5) Utilize Well Posters and have regular Health Education sessions on site during every chlorination.

6) Develop a filtration system in areas where refugees are drinking water from rivers and ponds and teach this idea by demonstration at BHU's and schools (appendix 6).

7) Manufacture appropriate technology, low maintenance, handpumps with a suction and delivery capability of at least 20 meters.

8) Develope spring fed reservoirs and simple piped schemes wherever possible (appendix 7).

Conclusion

Improving shallow wells and developing other water supply schemes will not solve the health problems by themselves. Along with technical solutions, must be regular Health Education sessions which focus on teaching simple messages about the correct use of whatever source of water is available.

Each one of these partial solutions also has its own unique set of advantages and difficulties. The only thing we have learned for certain is that no solution by itself is adequate for an entire refugee village. We must adapt a variety of approaches in every camp in order to fulfil one of the most basic human needs; that of an adequate supply of clean water. I hope this brief presentation offers an overview of several possible approaches.

HEALTH AND NUTRITION STATUS OF AFGHAN REFUGEES 1986

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UNITED NATIONS HIGH COMMISSIONER FOR REFUGEES

BACKGROUND

Since 1979, the number of Afghan refugees continue to grow steadily and is now established at 3 million. Like most developing countries, the majority of the population of the refugees are children and women of child-bearing age, comprising 47.5% and 28.5% respectively of the total population.

RESOURCES

Health services are provided by the collaborative effort of the Government of Pakistan, United Nations High Commissioner for Refugees (UNHCR) and Voluntary Organizations, and is implemented within the standards established by the government.

At the community level giving direct service to the community are 135 Basic Health Units (BHUs), 1 Central Health Unit (CHU) and 26 Sub Health Units (SHUs), run by the Government/ UNHCR; 52 BHUs and 13 SHUs run by the voluntary agencies. Each BHU covers approximately 15,000 population while each SHU covers approximately 5,000. Each BHU is staffed by a medical officer, lady health visitor midwife, dispenser, malaria supervisor, vaccinator, Sanitarian, and store keeper. MCH services as one of the component of primary health care are offered in all services points. This includes prenatal, postnatal, delivery and under five clinics. Unlike that offered by the voluntary agencies, nutrition services in the Government/UNHCR BHUs are available as part of the health education activity only. No form of supplementary feeding is given. On the other hand, the voluntary agencies, such as International Rescue Committee, Austrian Relief Committee, Christian Hospital Refugee Extension Project, The Salvation Army, Action Internationale Contre la Faim and Union Aid offer supplementary feeding either in the form of on-the-spot-feeding or take home ration. Some gives out milk feeding through the mechanical cow.

SITUATIONAL ANALYSIS

Mortality and morbidity rates are commonly used indicators of the health status of the community. In the case of the Afghan refugee community in Pakistan, it is virtually impossible to obtain statistical information mainly because registration of births as well as deaths are not mandatory. In view of this, available statistics are generated from surveys.

1. **Mortality**

   1.1 Available data on the health status of the Afghanistan children in 1977 showed that the infant mortality rate was 157 per 1000 live births (O'Connor, 1980, p. 177-184), com-

INAUGURAL ADDRESS

MINISTER SYED QASIM SHAH
FEDERAL MINISTER FOR STATES AND FRONTIER REGIONS
KASHMIR AFFAIRS AND NORTHERN AREAS
GOVERNMENT OF PAKISTAN

Brig. Said Azhar, Chief Commissioner for Afghan Refugees,
Mr. Levin Lyonette, Chief of Mission, UNHCR,
Excellencies,
Delegates,

Ladies & Gentlemen.

Assalamo Alaikum,

It gives me great pleasure to address the Inaugural Session of the 3rd Annual Seminar on Afghan Refugees Health Programme organised jointly by the Chief Commissioner for Afghan Refugees and the Chief of Mission of the UNHCR, Islamabad. While congratulating them for this laudable effort, I would like to welcome the delegates collected here this morning to deliberate on the health problems of the refugees.

Pakistan has played host to more than three million Afghan Refugees on its soil for more than 7 years now. I wish to reiterate once again the Government's determination to continue looking after these unfortunate victims of foreign aggression for as long as the problem lasts. While my government is making concerted efforts at finding a political solution to this problem, we are obliged to discharge our humanitarian obligation and to provide secour and relief to these afflicted millions with the help and assistance of the international community.

I am happy to note from the address of the Chief Commissioner and the Chief of the Mission of UNHCR, that we have come a long way in improving the quality of health care for Afghan Refugees in all fields. It is specially encouraging to note that having established a sound infra-structure for basic health care for them, we have moved forward in a number of specialized fields like TB and Malaria control, Mass Immunization of Children, Hygiene, Sanitation and Nutrition and increase the number of hospital beds meant exclusively for the Afghan Refugees.

While the Afghan Refugees continue to pour into Pakistan in large numbers and the problem continues to grow, unfortunately the international aid climate has not kept pace with the increasing burden on Pakistan's economy and budget. I would like to take this opportunity to remind the international community of their responsibility towards this humanitarian obligation and to provide greater assistance, specially in the field of nutrition and health care. In this context I would once again urge the NGO's and Voluntary Agencies in Pakistan, to give the government of Pakistan a helping hand and come forward with renewed determination as indeed they have done in the past.

In the end, I would once again wish the participants of the Seminar success in their deliberations and hope that their professional approach would result in useful and practical suggestions for improvement of the Health Care for the Afghan Refugees.

pared to 119/1000 among Afghan refugees in 1985 and 81/1000 in 1986 (CDC Survey, 1986); that for Pakistan was 100/1000 for 1977 (micro-nutrition survey 1974-1977).

1.2 34% of the children's deaths were diarrhoea-associated, 4% were due to measles and 1% due to malaria.

1.3 Among the provinces, Baluchistan has higher infant and neonatal mortality rate than North West Frontier Province (NWFP) and Punjab: 109/1000 live births and 64/1000 respectively; the neonatal mortality rates were 43/1000 live births and 40/1000 respectively.

1.4 Compared to NWFP and Punjab, Baluchistan, has a higher percentage of diarrhoea-related deaths: 31% and 36% respectively. Likewise it has a higher number of diarrhoea-related deaths occuring in children aged one month to one year than NWFP/Punjab: 79% and 50% respectively.

1.5 The percentage of children dying before reaching their fifth birthday decreased from 18.8% in 1985 to 12.1% in 1986; 12.1% of Pakistani children die between 1-4 years age in 1977 (micro-nutrient survey of 1974-1977).

1.6 All measles-related deaths and majority of the deaths associated with diarrhoea occurred among children aged 1 to 11 months. Likewise this age group has the highest percentage of all deaths (37%) compared to the other age groups.

1.7 The CDC survey further reveals that the neonatal mortality rate was 40/1000 live births in 1984, down from 46/1000 in 1985.

1.8 Neonatal tetanus, the primary cause of neonatal mortality, comprised 36% of neonatal deaths with the rate of 13 per 1000 live births. 60% of neonatal deaths were due to unknown causes, and 4% due to diarrhoea.

1.9 Maternal mortality data are not available simply because they are not reported and neigther are data on the average birth weight for Afghan babies because most of Afghan mothers are delivered by TBAs (traditional birth attendants and/or relatives).

2. Anthropometic measurements:

Weight and height measurement of children one through four years old revealed that 42% were above the median of the reference population, 1.9% were less than 80% and one child (0.2%) was less than 70% of the median. Children who were equal to or above the median of the reference population were 42% in NWFP/Punjab and 33% in Baluchistan; those who were less than 80% were 1.1% and 4.2% respectively.

3. Immunization status:

Although the BCG vaccination coverage has increased from 41% in 1985 to 55% in 1986, the levels of DPT, polio and measles vaccination are inadequate. In a developing world, the BCG coverage is the highest among those vaccines included in the WHO Expanded Programme on Immunization.

4. **Morbidity:**

We are unable to get any reliable information on morbidity for analysis, however it may be assumed that the pattern of mortality is partly a reflection of the leading causes of serious morbidity. Infectious disease and its synergistic interaction with malnutrition are of primary importance in developing countries.

4.1 The only information available at this point in time is the number of out-patient visits to the BHUs by nature of sickness which may give us an idea although not accurately of the pattern of morbidity in the community. I repeat, that these are the number of visits and not the number of cases in the community.

4.2 In 1985, there were a total of 414,368 out-patient visits to the Government/UNHCR BHUs, 17% of which were from children 0-4 years old. For all ages and for those 0-4 years old, respiratory infections and diarrhoea were the two leading causes of out-patient visits, comprising 20% and 13% respectively for all ages; 26% and 24% respectively for children 0-4 years old. Diarrhoea, anemia and malnutrition comprised 33% of the total visits of all ages and that for 0-4 years old (annual report 1985).

4.3 All the provinces follow the same pattern although of varying percentages. In Punjab, malnutrition is not included among the reported complaints as a cause for a visit to the BHUs.

DISCUSSION

Health cannot be attained where poverty and misery abound; where food and safe water are scarce, where housing is inadequate and where public and community services are wanting. However, measures can be undertaken to improve the existing situation to reduce mortality and morbidity. In many countries where health standards have been upgraded by intensive programme, maternal and infant mortality have declined dramatically demonstrating that targic waste of human life can be prevented.

Although the results of the survey are very encouraging as shown by improvement of health indicators, it is no reason for us to relax and sit back because malnutrition does exist although not in an acute condition. Some indicators point to this fact.

Areas of Concern:

One of such indicators is that the disease conditions associated with the children's death and the nature of sickness as a caues for patients' visits to the BHUs are conditions compounded by malnutrition. We cannot overemphasize the synergistic relationship between infection and malnutrition.

Puffer's study on the Patterns of Mortality in Childhood, conducted by 13 teams in developing and 2 in developed areas confirmed beyond doubt the existence of synergism between infections and malnutrition. His study revealed that nutritional deficiency is an associated cause in 60.9% of the deaths from infectious diseases, against 32.7% of deaths from all causes.

A study made by Dyson on the Infant, Child and Maternal Mortality and Associated Conditions of Health in the Greater Kabul Region of Afghanistan (1972-1975) revealed that the interaction of malnutrition and infectious diseases is probably the simple most important feature of the cause-of-death structure of child mortality in Greater Kabul. The same study showed that the leading cause of children's mortality were measles followed by enteritis. In contrast to this finding, the CDC survey of the Afghan refugees in 1986 disclosed that the leading cause of deaths was diarrhoea-related followed by measles.

An added area of concern is that the conditioning and precipitating factors for acute malnutrition and death are present in the refugee camps, thus there is always a potential danger of a rise of malnutrition among the refugees. The conditioning factors present are poverty, poor sanitation and hygiene, inadequate water supply, poor drainage, and nutrition ignorance especially to weaning foods. The common precipitating factors are diarrhoea and infectious diseases. These coupled with an already existing undernutrition are major deterrent in growth and development, starts the vicious cycle of infection and malnutrition and eventually death.

Malnutrition is a major health problem and a social disease with a "web of causes" and a "web of effects". The underlying cause of malnutrition is varied. The conditioning and precipitating factors interact in highly significant ways. An interplay of these factors contributes to an inadequate supply of nutrition to the body, thus triggering a chain of events which eventually result in frank nutritional deficiency disease and death. There is therefore a need for nutrition surveillance system and a multisectoral food and nutrition strategy.

Another cause for concern is that every day there is an influx of new refugees, who because of the traumatic experience they had endured, the physical and emotional stress they had undergone, not to mention the near-starvation journey to Pakistan makes them a new cohort of succeptibles to a nutrition crisis. Their health and nutritional status need to be assessed upon arrival and monitored from then on until they have more or less established themselves.

The infant mortality rate although showed a steady decline is still high compared to other Asian countries. Most of the deaths among children occurred among those aged 1-11 months. Various factors may contribute to this. The Afghan mothers do not believe in giving weaning foods to their babies. In fact some people say that only 10% of Afghan babies are weaned at 6 months old. Although they breast-feed their babies till two years old, we know for a fact that from four months old, breast milk is not sufficient to supply the nutritional requirement of the infant. Thus weaning diarrhoea takes place which is supperimposed in an already undernourished child and the vicious cycle of malnutrition and diarrhoea occurs which ultimately leads to dehydration and death. In addition poor sanitary conditions, improper sewage disposal, and non-potable water supply contribute to this cycle. Thus in this period, it is the quality of infant care and environemntal conditions that play a role.

Another contributory factor is the closely spaced pregnancy. Most often the next pregnancy occurs before the previous child is even one year old. Thus the mother's attention and care as well food is divided, the child is neglected or probably relegated to the care of an older sister who is another child herself. All these factors contribute to the child's vulnerability to malnutrition, infection and death. In addition the mother already drained by the repeated pregnancies gives birth to a low-birth weight baby which is very vulnerable to malnutrition infection.

Unfortunately as stated previously, data on maternal mortality and birth weight are not available. In 1975, WHO estimated that out of 137 million births world-wide, 22 million were low birth weight infants. Of these 21 million are born in the developing world and 80% of these were small for gestetrional age (SGA) infants. We can therefore, surmise that most of the Afghan babies are SGA infants too.

60% of the neonatal deaths among Afghans were due to unleneun (CDC Survey, 1986). Like other developing countries, it may be due to prematurity and/or birth injuries or trauma and congenital malformation. Neonatal deaths are usually the result of health care of the mother during pregnancy birth practices and delivery complications.

A study by Cleland and Sather on "The effect of Birth Spacing on Childhood Mortality in Pakistan" disclosed that neonatal and infant mortality rate decreased as the birth interval increases: for birth intervals less than 12 months, the neonatal and infant mortality rate were 171/1000 live births and 258/1000 live birth respectively; of birth intervals 54-59 months, neonatal mortality rate was 69/1000 live births and 85/1000 live births respectively.

One big cause of alarm is the high rate of neonatal tetanus death. WHO has set a goal of less than 1 death per 1000 live births from neonatal tetanus by the year 1990 and no death from that cause by the year 2000. With the present rate of coverage that we are having it is very doubtful it we can even achieve WHO's goal. This indicator clearly shows that our health services are not reaching the target population. Some causes may be: Lack or no prioritization of problems which stem out from poor planning, poor time management, inadequate manpower or just probably due to lack of motivation on the part of the staff and poor supervision on the part of the supervisors. Another contributory factor is the traditional but erroneous habits of Afghan mothers prohibiting the babies to be brought out until 40 days old. The baby may not be brought to the clinic even if the baby is sick or if they bring them at all, it is too late. There is therefore a need for a health worker to "reach out" for those who need our service most. If the people cannot come to the clinic, the service must go to them.

In a country where communications are good and most of the deliveries are done by indigenous midwives, preventive programme from tetanus could be based on education and supervision of these birth attendants; however in some highland areas where the infection is common, with poor transportation facilities, close contact with domestic animals, and when deliveries are supervised, immunization of pregnant mothers during pregnancy would require the greatest consideration. Inasmuch as we cannot supervise the birth attendants at all times and even if trained cannot expect them to use asepsis most of the times, and neither can we expect to immunize 100% of the pregnant mother, it is recommended that both training of TBAs and increase coverage of tetanus immunization to women of child-bearing age be implemented.

It is very sad to note that most of the children still die from very preventable causes (diarrhoea, measles and neonatal tetanus); had our health services did what they were supposed to do, the deaths would have been kept at a minimum. Diarrhoea is the cheapest disease condition to treat, while measles and neonatal tetanus are preventable and in principle eradicable through immunization. Despite the claims of our health workers that they are doing health education with emphasis on oral rehydration therapy, it seems that the message is not getting across. On top of this, the traditional but fallacious habit of the Afghan mothers to withdraw breast milk and water during diarrhoea exacerbates the condition thus leading to dehydration and death.

Our immunization programme definitely needs improvement. New strategies need to be planned to reach the target population and for them to have the complete dose of vaccination for complete protection.

UNHCR's NUTRITION THRUST FOR 1986-1987

WHO's goal of health for all by 2000 aims to provide all people a level of health such that they can work productively and participate actively in the social life in the community they live in. It is aimed at all people irrespective of social and economic development but social justice demands that greatest attention be paid to the underprivileged.

In consonance with this, UNHCR in its Project of Humanitarian Assistance to the Afghan Refugees in Pakistan aims among other to: provide the Afghan refugees preventive and curative services comparable to those available to the local population and to provide basic and supplementary food commodities as a supplement to their basic needs.

Our nutrition thrust for 1986-1987 will be directed towards the solution of problems revealed by the survey. Our primary aim is to strengthen the nutrition service as an integral part of a comprehensive MCH component of primary health care with the concept of multisectoral and multidisciplinary approach. We hope to identify areas with nutrition and nutrition-related problems through surveys; cure the severely malnourished children medically and through direct food assistance; promote the nutrition of the general population especially the vulnerable age groups; emphasize the availability, preparation and correct use of oral rehydration salts through health and nutriton education (not the quasi-scientific teaching) based on a few and simple messages. Because the Afghan society is male dominated, we wish to direct our health education not only towards the female but also to male population and get them involved in decision-making pertaining to health. School health education will be an integral part of this health education activity. We aim to provide health protection through clinical and preventive programme; food production through home gardens. We hope to establish a permanent and reliable nutrition surveillance system that will facilitate the development of various intervention programmes.

Realizing that education of health personnel is a tool of improving health care of the community, we wish to embark on a training programme for all level-medical officers, lady health visitors, and community leaders.

Some intervention schemes which we hope to implement and which, although have little relevance to nutrition promotion have considerable effect on the nutritional status are: First, increase of immunization coverage of children less than five years old and women of child-bearing age. Strategies such as immunization surveys, mass immunization campaigns and crash immunization programmes shall be encouraged.

Second, coordinated with proper authorities for the improvement of water supply and sanitation and hygiene.

Last but not least, we hope to elicit community participation through organizing a network of community health workers and dais to narrow the gap between the health services and the refugees especially women.

Technical knowledge is without relevance when there is no political will. It is therefore our greatest desire to obtain political cooperation to transform this plan into reality.

The people we serve, health providers, and the political machinery must have a common consensus that something must be done now.

THE ROLE OF WORLD FOOD PROGRAMME IN THE NUTRITION PROGRAMME

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WORLD FOOD PROGRAMME
ISLAMABAD

First of all I would like to comment on the title of this presentation "The Role of WFP in the Nutrition Programme". It is wrong in the sense that WFP is running an emergency feeding programme for the Afghan Refugees, not a Nutrition Programme. Small "Nutrition Programmes" are run additional to the emergency feeding by serveral Voluntary agencies, but WFP is not involved in their management.

Perhaps I should say a few words about how WFP is working. We clearly differentiate between three kinds of Food Aid here in Pakistan. There is the Supplementary Feeding Project, which is directed towards vulnerable groups. It provides a supplement to the energy and protein requirements of these groups and the amount does not exceed 50% of their needs. The second form is "Food for Work", where WFP rations are given either as part payment of wages or as incentive to participate in voluntary work. In these Food for Work Projects the nutritional objectives are secondary, economic considerations prevail, and the value of the ration in monetary terms has priority. The size of the ration is calculated to cover about 80% of the average family protein and energy requirement. The third form is the food assistance in emergency situations, when the mere survival of refugees or otherwise effected groups has to be ensured. Only this form is given to the Afghan Refugees, for the other two the Pakistani population is the recipient.

Because of the nature of the food items available – they have to be transportable over great distances – the WFP rations can not provide all the nutrients necessary to cover the daily requirements of the beneficiary.

The composition of WFP rations is influenced and limited by a number of factors:

- the nutritional requirements of the beneficiaries.
- the availability of commodities and their relative price on the international market.
- the specific objectives of the food assistance in each type of project.
- the average composition of the local diet and the pattern of food habits.
- the acceptability of WFP food.
- logistics, that means facilities for and conditions of transport and storage and the distribution of commodities within the recipient country.

and, naturally, the government's preferences and policies.

Now back to the Afghan Refugees

Since 1980 the World Food Programme provides the Afghan Refugees with basic food

items. According to our guidelines – which are applied all over the world and established in colaboration with WHO and FAO – and in consultation with the Government of Pakistan, we decided the composition of the food basket. As mentioned earlier, this decision is influenced by the availability of food, or let us say the food WFP has access to, and the food habits of the beneficiaries.

In order to expedite the delivery, the WFP ration for emergency operations is limited in the number of commodities. For the Afghan Refugees the food baskets consists of three items: Wheat, the cereal which represents the staple food; an additional source of protein which is DSM (Dried Skimmed Milk); and a concentrated source of energy which is either edible oil or edible fat.

Originally, at the beginning of the assistance, the basket was supposed to contain also pulses, but we had to take them out. The plan was to purchase them locally, but they were not made available and could therefore not be supplied. So we increased the amount of wheat and DSM. We replaced the 40 g of pulses by 100 g of wheat and increased the ration of DSM from 20 g to 30 g per head per day.

At that time it was also discussed whether there should be different ration – sizes for adults and children, but for how long should we consider person a child and who knows how many children are there? So, that idea was discarded as unfeasible and no difference is made between the age groups.

The exact quantities per head per day are now as follows:

500g Wheat
30g of edible oil or edible fat
30g of DSM
additional to that,
UNHCR provides: 20g of Sugar
and 1.5g of Tea per head per day

With this amount of food we actually exceed what we would call a "Survival ration". We provide around 2000 kcal per day and far more than the recommended 40g of protein. As in all emergency situations, adhoc multilateral food donations are supplied. As already mentioned, UNHCR provides sugar and tea. Saudi Arabia channel dates through WFP for the month of Ramazan, the US Government donated raisins and we had received biscuits from Australia. In these cases WFP organises the transport and monitors the distribution.

For WFP the most important item in this operation is the wheat, because it is the staple food on which most of the Afghan Refugees rely on. In order to insure a regular and continious supply of this item, WFP and the Government of Pakistan worked out a "replenishment system". The Government advances wheat from their national stocks for distribution and these quantities are replaced as soon as our shipment arrives.

But WFP provides – out of its own resources – only about 50% of the total amount distributed. The rest comes from bilateral donations, which are also channeled through and monitored by WFP.

Till 1983 we received more food than we could distribute and we carried over positive balances from year to year. In 1984 these bilateral donations dropped rastically, due to scarcity of resources and crisis prevailing in Africa, and other parts of the world, where food was also most urgently needed. In 1985 and 1986 the situation improved again. Nevertheless, the only regularly supplied items are wheat, sugar and tea. DSM and edible fat – pledges are insufficient and accordingly their distribution. In the case of DSM for example, for the last months no general distribution was possible. The quantities delivered were nearly all handed over to voluntary agencies for their feeding programmes.

The upraise in the number of refugees also creates problems and WFP is continiously trying to convince the donor countries to increase their pledges.

But despite of the irregular supply of some food items, the nutritional situation of most of the refugees seems to be acceptable, according to the information we receive.

Nevertheless the problem of how to reach the real needy groups remains. There are the new arrivals and the so called "Vulnerable groups", the pre-school children and pregnant or nursing morthers.

For the new arrivals WFP and UNHCR recently started a joint project. These refugees will receive a one month food ration in order to bridge the time between their arrival and their settlement. This project will supplement similar activities of a number of Voluntary Agencies.

Regarding the Vulnerable Groups, WFP is increasingly supporting Voluntary Agencies in their feeding programmes directed to children and mothers. Since 1985, WFP is targetting food distribution through these agencies and by now cooperates with about 10 Volags.

We recognise and appreciate the efforts and achievements of GOP, UNHCR and the difderent Voluntary Agencies in improving the health and sanitary conditions in the camps. And we believe that these achievements helped to reduce the impact on the nutritional situation of the refugees, which the lower food contributions by the donor countries might have had otherwise.

And we are sure that though a still closer cooperation between WFP, GOP and other agencies involved, the situation can be improved further, specially for new arrivals and Vulnerable Groups.

NUTRITION IN PRIMARY HEALTH CARE

DR. MUSHTAQ AHMED KHAN
DEPUTY CHIEF (NUTRITION)
PLANNING AND DEVELOPMENT DIVISION, ISLAMABAD

Over the last many years vast efforts have been made by governments, bilateral or international organizations, non-governmental and voluntary groups to fight hunger and malnutrition. The dedication and energy professionals and community workers trying to improve the living conditions of their people or assist them in their own efforts are impressive. In spite of this, malnutrition remains one of the world's most important problems.

The causes of malnutrition are multifactorial and interlinked with those of poverty, dependency and inequality, and any lasting solution of the nutrition problem will depend on the degree of genuine developed achieved by the population. Therefore, nutrition interventions should as far as possible be implemented, not in isolation, but as an integral part of development strategies and closely related to other measures aimed at attacking the causes of malnutrition at their roots. Furthermore, the scarce human and financial resources available demand that the suitability of proposed interventions should be carefully assessed so that those which would best help people to improve their lives may be chosen.

Nutrition is now recognized as an important concern. Adequate nutrition is a necessary, although not sufficient, condition for full productivity and well-being of the nation. Malnourishment can be under and over-nourishment. Under-nourishment among adults may lead to low productivity, thereby decreasing the value of the nation's "human capital". It can also result in resistence to diseases, increasing the burden budget. Over-nourishment can result output. Such people are vulnerable to diseases of obesity and over-weight.

Nutritional disorders among expectant and nursing others are known to have serious consequences for the health and well being of themselves and their off-spring. Serious protein-calorie malnutrition among children and youth prevents them from realizing their potential for growth and development. Learning is impaired, and the severe cases, mental development may be retarded, thus reducing the efficiency of our investments in education. Physical growth may also be hampered, leading to weakness, sickness and even death. In addition to the wide-spread, growth failure, the high morbidity and mortality rates among our infants and preschool children bear testimony to early protein-calorie malnutrition. If we fail to allocate optimal resources to the prevention of protein-calorie malnutrition, its impact might be felt in the years to come.

The problem may also be viewed in terms of specific deficiencies. Deficiency of iron may result in low productivity and ill health. Iodine deficiency leads to goitre and deaf-mutism. Deficiency of vitamin A at a young age may create eye diseases eventually resulting in blindness.

Recognizing the importance of nutrition to the nation's development the government of Pakistan decided to take steps to improve the nutrition situation in the country. It was quickly realized, however, that nutrition is a field demanding a multi-disciplinary approach. Malnutrition is a problem which concerns doctors, agriculturists, educators, nutritionists, economists,

KEY NOTE ADDRESS:
AFGHAN REFUGEE HEALTH PROGRAMME
NATIONAL PERSPECTIVE

COLONEL ALTAF-UR-RAHMAN KHAN
DIRECTOR MEDICAL SERVICES
CHIEF COMMISSIONERATE FOR AFGHAN REFUGEES

Al-Haj Syed Qasim Shah, Brig. Said Azhar, Mr. Kevin Lyonette, Dr. Claude Aguillaume, Excellencies, Ladies & Gentlemen, it is a great honour for me to address this August gathering.

You have already heard the excellent and informative speeches of Chief Guest, Chief Commissioner and the Chief of UNHCR and have learnt the salient features of the Afghan Refugees problem. Before coming to the refugees we may have cursory look at the Pakistan National Health State, which is being modelled after the World Health Organization's Slogan "Health for all by the year 2000".

NATIONAL STATUS:

In Pakistan, there is one Doctor for 3600 persons. However, this figure does not reflect the differences which exist between the urban and rural areas of Pakistan. On an average there is only one Doctor available to about 12000 persons in the rural areas of Pakistan and similar is the condition of the hospitals. These figures are based on the Planning Divisions report of January 1986 and since then the national health facilities have been and are being augmented not only in the curative but also in the preventive and promotive fields.

AFGHAN REFUGEE HEALTH CARE PROGRAMME:

Government of Pakistan and United Nations High Commissioner for Refugees (UNHCR) are jointly organizing the assistance for the Afghan refugees, which now covers all the health aspects. Other United Nations Agencies which provide assistance to the refugee health programme are World Health Organization, World Food Programme and UNICEF. Several governments provide bilateral aid to the health programme of refugees in addition to their support through UNHCR. This may be direct or channelled through voluntary agencies called VOLAGs or NGOs.

SHORT HISTORY OF AFGHAN REFUGEE HEALTH PROGRAMME

PHASE 1979-1980

Health services at the early stage of the emergency phase were dependant on local national health services. Later on mobile and static dispensaries were established in refugee villages. The presidential directive in December 1980, established the structure of the refugee health services, headed by a director at the centre and the project directors in the provinces. Total UNHCR expenditure for health in 1980 was equal to US$ 2,220,000.

PROCEEDINGS

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